From: Hah, Josephine
To: Bond, Matthew R; Solomon, Ruth; normane@gao.gov
Cc: Villarreal, Chris; Banipal, Ben; Gee, Randy; Turner, LaDonna
Subject: Region 6 Response to April 24, 2018 Meeting Follow-up Request
Date: Friday, May 4, 2018 2:22:00 PM
Attachments: Cherokee Tribal Consultation Letter Wilcox Source Control PP 2-6-18.pdf
MCN Tribal Consultation Letter Wilcox Source Control PP 2-6-18.pdf
S&F Tribal Consultation Letter Wilcox Source Control PP 2-6-18.pdf
Pueblo of Acoma consultation ltr 10 9 16.pdf
Pueblo of Laguna consultation ltr 10 9 15.pdf
Jackpile Timeline of Events.doc
Ref. 23 Fishing Memo.pdf
Laguna MOU signed.pdf
R6 RTOC Report-November 2017.pdf
Santa Clara Pueblo Draft Tribal Environmental Assessment Document May 20....doc
image001.png
image002.png
image003.png
image004.gif

Matt,

In response to your April 24, 2018 request, please see the attached documents (red). We have started our records search of the 21 sites identified as having no tribal interest. We should have more information to provide by next Friday.

Below you will find the follow ups from today's meeting and follow-ups from these previous meetings:

1) Agenda from RTOC meetings where potential opportunities for tribal consultation was discussed for the Wilcox Oil Company. Alternatively, if you have emails or other documentation to demonstrate that consultation was offered, that would suffice. Attached Cherokee, MCN, and SF Tribal consultation invitation letters regarding the Wilcox Oil Company Superfund site. R6 RTOC Report-November 2017.
2) Copies of the two letters from the Grants Mining District offering consultation to the Pueblos that did not make it into TCOTS. Attached Pueblo of Acoma and Pueblo of Laguna consultation letters. We could not locate letters that were dated.
3) A copy of the tribal risk assessment for the North Railroad Avenue Plume Santa Clara Pueblo Draft Tribal Environmental Assessment Document
4) Documentation, if available, on the Region's offering consultation to tribes associated with the 21 sites within the data Region 6 officials reviewed in December 2017 that are on or near tribal reservations that did not elicit Native American interest in consultation. If possible, provide documentation of the tribal response as well. (We can provide a list of the sites indicated, if needed).

As promised, attached you will find the Superfund FAQ forwarded us by OITA that we referenced in the phone call.

Below are follow-up items we requested from previous meetings. If these documents have been sent previously, either in whole or in part, please forward the documents to me and I will save them and confirm receipt.

Follow-ups from December 15, 2017 ROI:

1. Attendance list – Received 24 April
2. Example of an administrative record for Tar Creek which shows informal coordination with the tribe.

3. Examples in the Tar Creek administrative record showing documented change to site boundary because of EPA's move to a watershed-focused approach.

Follow ups from December 7, 2017 ROI on Jackpile Paguate:

1) Attendance list – Received 24 April
2) Chronology and documents or letters indicating coordination with Laguna Pueblo. Jackpile Timeline of Events
3) Memo talking about fishing on the Pueblo lands. Ref. 23 Fishing Memo
4) Examples of cultural awareness stipulation from Pruitt Site work plan.
5) A copy of the Laguna Pueblo MOU with EPA. Laguna MOU signed

If you have any questions please let me know. Thank you.

Josephine Hah, CPA
Accountant
Office of the Regional Comptroller
U.S. Environmental Protection Agency, Region 6
☎: 214-665-9780
✉: Hah.Josephine@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

February 6, 2018

The Honorable Bill John Baker
Principal Chief
Cherokee Nation
P. O. Box 948
Tahlequah, OK 74465

RE: Wilcox Oil Company Superfund Site

Dear Principal Chief Baker:

The purpose of this letter is to extend an invitation to the Cherokee Nation to conduct government-to government consultation with the U.S. Environmental Protection Agency (EPA) Region 6 regarding oil refining impacts at the Wilcox Oil Company Superfund Site. The EPA anticipates proposing a remedial action to address specific source materials at the site in April 2018. The purpose of the consultation is to provide information to the Cherokee Nation's leadership about the proposed action and to solicit input.

The consultation will be conducted in accordance with the EPA Policy on Consultation and Coordination with Indian Tribes. The EPA's anticipated timeline for the consultation and coordination is from the date of this letter until 30-days. During this time, the EPA will request a meeting with Cherokee Nation leadership for consultation and will continue to work at the staff level to provide information to the Cherokee Nation environmental staff.

The draft Source Control Proposed Plan (Plan) has been provided electronically to Cherokee Nation environmental staff. The Plan includes the evaluation of three options and is proposing Excavation and Offsite Disposal for the nine (9) identified source areas. The total estimated volume of source material is approximately 34,622 cubic yards at an estimated cost of $5,260,232.

We value the observations, insights and recommendations of the Cherokee Nation leaders and members, and pledge to remain engaged as we continue to work on this site. Should you have any questions or concerns, please do not hesitate to contact me at (214) 665-6701, or your staff may contact Katrina Higgins-Coltrain at (214) 665-8143 or coltrain.katrina@epa.gov. If you have any questions about the consultation process, please contact Randy Gee, Region 6 Office of Environmental Justice, Tribal and International Affairs, at (214) 665-8355.

Sincerely,

Carl E. Edlund, P.E.
Director
Superfund Division

Jackpile Mine - Site Chronology

March 17, 2009 – Invitation letter sent to Laguna Pueblo Governor Antonio, regarding Grants Mining District Partnership Meeting to be held on April 7, 2009.

April 7, 2009 – Partnership mtg w/feds, state & tribes in Albuquerque to develop holistic approach for the Grants Mineral Belt and 5 yr plan.

Sept 8, 2009 - Letter to Laguna Pueblo Governor Antonio confirming meeting date for September 24, 2009.

Sept 24, 2009 – EPA Superfund mtg w/Pueblo of Laguna to discuss concerns, potential NPL listing, and consultation.

Oct 1-14, 2009 – EPA conducts flyover to measure uranium ground concentrations

Oct 13, 2009 – EPA Superfund began formal consultation with the Pueblo of Laguna.

Jan 2010 – EPA and Laguna begin drafting MOU for Superfund's assessment and removal activities

Feb 16, 2010 – EPA discusses flyover results w/Governor of Laguna

Feb 17-18, 2010 –EPA and Publeo of Laguna perform site recon for site assessment sampling.

Mar 1, 2010 – EPA collected samples at the Jack Pile Mine

Mar 9, 2010 – EPA mtg w/Governor of Laguna w/radiation experts to answer questions about flyover results

Mar 29, 2010 – EPA sent letter to Stephen Spencer with DOI documenting meeting regarding the Jackpile Mine site and possible listing on the NPL.

April 22, 2010 – EPA mtg w/Laguna 9:00 am. to discuss GMD 5 Year Plan and met evening w/SNEEJ, MASE and BVWA to discuss GMD 5 Year Plan

April 2010 – Evaluated the Jackpile mine sampling results.

June 9 – EPA staff mtg w/Pueblo of Laguna environmental staff to discuss the draft PA report for Jackpile Mine.

June 2010 – develop Hazard Ranking Score for the NPL if the Jackpile Mine meets 28.5

June 22, 2010 – Tribal Consultation process Memorandum of Understanding signed by the Laguna Pueblo

July 16, 2010 – Conference call with Laguna Environmental to discuss concerns about listing and conducting additional investigation

August 2010 – GMD 5-year Plan released to the public.

September 9, 2010 – Meeting DOI agencies to discuss their involvement in developing the ESI workplan for Jackpile

October 7, 21, 2010 – Conference call with DOI agencies regarding Jackpile

November 3, 18, 2010 – Conference call with DOI agencies regarding Jackpile

November 8, 2010 – Conference call with Laguna Governor Antonio to discuss additional sampling needed at Jackpile and involving DOI in development of ESI workplan

November 9-10, 2010 – Site Assessment and Enforcement conduct file review of documents at Laguna Pueblo

December 7, 2010 – EPA and contractor meet with Laguna Environmental staff and Jackpile reclamation manager to discuss additional sampling needed at Jackpile.

December 8, 2010 – Meet with DOI agencies for update.

December 15, 2010 – Briefing with Wren on Jackpile status.

December 20, 2010 – Conference call with DOI agencies. Sue, with the NM Solicitors Office, states that they had a meeting with the Laguna Pueblo and the Pueblo has hired a company to complete the ROD requirements, installed a network of groundwater wells, fencing and address the gaps in the ROD. 1.2 million was left in the trust account and they were going to close out the old 638 agreement and start a new agreement with the funds to dove tail along with the EPA work.

December 21, 2010 – Conference call with Marvin Sarracino and Adam to discuss the gaps in the ROD. Pueblo said that they had a contractor that was addressing the gasp and they would provide us a deficiency checklist, 2007-2010 groundwater data, maps of well locations including the 2 new wells, analysis of ponded water and the final report from the contractor in 3 to 4 months.

January 6, 2011 – Conference call with DOI agencies regarding Jackpile. Tentative date for next ESI work group set for February 15/16. The ground water conceptual model will be forwarded to the group when we receive it from Weston.

January 27, 2011 – Conference call with DOI agencies regarding Jackpile. Meeting scheduled for February 16, 2011, at the Laguna Environmental Department with the workgroup. The ground water conceptual site model will be forwarded to everyone prior to the meeting for review. Projected ESI sampling date is the week of March 28. Next conference call scheduled for February 7 at 10:00 am.

February 3, 2011 – Went to a BP office location in Plano, TX, with enforcement officer and OSC Jon Rinehart, to review maps of Jackpile Mine site.

February 7, 2011 – conference call with DOI agencies. Discussed meeting on February 16, at Laguna; coordinating driving/carpooling.

February 14, 2011 – Emailed the draft conceptual site model to the technical working group for review before the meeting on the 16th.

February 16, 2011 – Meeting with the technical workgroup at the Laguna Environmental Department. Tour of the Jackpile Mine site was given by Marvin Sarracino. Ben Castellana, with Weston, gave a power point presentation of the conceptual site model. Requested comments from the workgroup on the model. ESI workplan will be developed and emailed out to the workgroup prior to ESI sampling tentatively scheduled for the week of March 28, 2011.

March 23, 2011 – Emailed the technical workgroup to remind them to comment on the conceptual site model and stated that the draft ESI sampling plan would be forwarded soon for review/comment.

March 25, 2011 – ESI sampling event rescheduled for the week of April 18, to allow for additional time to discuss comments made to the ESI sampling plan.

March 29, 2011 – Conference call with technical workgroup to discuss the concerns about the ESI sampling plan and make needed changes.

March 30-31, 2011 – EPA Site Assessment met with Marvin Sarracino and Curtis Francisco to start assessments on three mine sites located on the south side of Laguna Pueblo that were not part of the Jackpile Mine.

April 6, 2011 – Conference call with Jackpile technical workgroup to discuss the ESI sampling plan.

April 12, 2011 – Emailed the revised ESI sampling plan to the technical workgroup with all the agreed upon changes/additions.

April 18, 2011 – ESI sampling event at Jackpile Mine took place with EPA,Weston contractors, Laguna Environmental and Laguna Mine Reclamation Technician.

May 11, 2011 – Meeting with Governor Luarkie, Adam Ringa and Jim Hooper to give the new governor an update on the Jackpile Mine site activities and Removal activities. EPA attendees were Wren Stenger, LaDonna Turner, Steven Harper and Warren Zehner.

July 5, 2011 – Called Jim Hooper and left a message about Jackpile and Removal update scheduled at a council meeting. Several emails back and forth with tentative dates.

August 3, 2011 – Emailed the revised conceptual site model (with ESI results incorporated) to the Jackpile technical work group (Laguna, DOI, USGS, BLM, USGS, BIA, DOI contractor, Laguna contractor, EPA NPL coordinator).

August 3, 2011 – Emailed Stephen Spencer with DOI to request a meeting to discuss the next steps for the Jackpile Mine site. Meeting is scheduled for September 9, at the BIA Office in Albuquerque.

August 6, 2011 – Formal presentation given to Governor Luarkie, staff and council at council meeting. Site Assessment and Removal Program gave presentation on past and current activities. Amy Garcia, Laguna Environmental, was also present at this meeting. Requested that the new Governor and council provide a letter or resolution supporting the listing on Jackpile Mine to the NPL by December 1, 2011.

August 10, 2011 – Emailed the draft Expanded Site Inspection (ESI) report to the Jackpile technical work group for review and comment.

August 31, 2011 – Received preliminary comments from Rick Newell, DOI contractor regarding the draft ESI and CSM.

September 1, 2011 – Had a conference call with participants of the Jackpile technical workgroup regarding the draft ESI and revised CSM. Agencies on the call included DOI, BIA, BLM, EPA, NM Solicitors Office, Laguna Natural Resources, and EPA Weston Contractor. Deadline for comments September 16, 2011. Discussed comments received from the DOI contractor, Rick Newell.

September 9, 2011 – Meeting with DOI in Albuquerque. EPA Site Assessment and Removal Staff and EPA attorney met with DOI, BLM, BIA, USGS and the NM Solicitors Office to discuss the possible NPL listing of the Jackpile Mine site to the next NPL update in March 2012.

September 15, 2011 – Received comments on the CMS and ESI from Marvin Sarracino from Laguna Reclamation.

September 16, 2011 – Received comments on the CSM and ESI from DOI/USGS.

September 20, 2011 – Conference call with Weston Contractors and NPL Coordinator to discuss comments received and updating the HRS package with the ESI data.

September 22, 2011 – Mailed letter to DOI as a follow-up to the Sept. 9th meeting. Requested a letter of support from DOI for the NPL listing of Jackpile Mine.

October 11, 2011 – Contacted Adam Ringia to coordinate Jackpile Tour and Gov. Luarkie meeting with Mathy on October 25.

October 25, 2011 – Site Assessment and EPA HQ w/Mathy met Gov. Luarkie for breakfast. Gave a site tour of Jackpile Mine to Mathy and other EPA HQs staff. Laguna Environmental assisted in the tour.

December 2, 2011 – Received letter from now Pueblo Gov. Luarkie, support previous Gov. Antonio's MOU, and resolution to have the Jackpile Mine site added to the NPL.

December 6, 2011 – Received letter from Stephen Spencer with DOI stating that they have no position regarding the proposed listing of the Jackpile Mine to the NPL.

March 15, 2012 – Jackpile proposed to the NPL.

August 17, 2012 – Meeting Gov. Luarkie, Adam Ringia and Pueblo Attorney to discuss status of Jackpile and introduce RPM, Petra Sanchez, as the new contact person.

MEMORANDUM OF UNDERSTANDING
REGARDING CERCLA ACTIVITIES
Between the
UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY, REGION SIX
And the
PUEBLO OF LAGUNA

I. PURPOSE

This Memorandum of Understanding ("MOU") is entered into between the United States Environmental Protection Agency, Region 6 (the "EPA"), and the Pueblo of Laguna (the "Pueblo")(collectively "the Parties") to facilitate consultation, coordination and cooperation among the Parties regarding plans and activities to assess the impacts of uranium mining and ensure the protection of human health and the environment.

II. ROLES AND RESPONSIBILITIES

A. General Principles and Goals

The EPA is committed to working with Tribal Nations, including the Pueblo, in a manner consistent with the Presidential Memorandum dated April 29, 1994, 59 Fed. Reg. 22951 (May 4, 1994)("Government-to-Government Relations With Native American Tribal Governments") and the EPA 1984 Indian Policy. EPA's policy is to act in a manner respectful of each Tribe's status as a sovereign nation and to consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments and their lands and environment. Region 6 EPA has adopted a Tribal Consultation Policy Statement and Elevation Protocol, hereby incorporated by reference and attached hereto, which provide additional guidance.

The Pueblo of Laguna is a federally recognized and sovereign Indian Tribe with jurisdiction over lands recognized as Indian country. The Pueblo has authorities under Tribal and federal law which it may, in its discretion, exercise to further the best interests of the Pueblo and Pueblo citizens. The Pueblo determines under its laws and custom to whom authorities are delegated within its government and who may represent the Pueblo in government-to-government interactions. The Pueblo has determined that an MOU with EPA will facilitate coordination and consultation about activities related to contamination from uranium mining and its impacts on lands, structures, resources and residences of the Pueblo and Pueblo citizens.

The Pueblo and EPA mutually agree that the goals of protecting the environment and protecting human health are of the utmost importance. The parties intend that the activities and procedures described in this MOU will help achieve these goals for the benefit of the citizens, natural resources, cultural resources, economy and other interests of the Pueblo and others who may be affected by contamination related to uranium mining.

B. Scope of Activities

This MOU is intended to cover activities undertaken by Region 6 pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended, 42 U.S.C. Sections, 9601 et seq.

EPA – The parties acknowledge that EPA's plans include, but are not limited to, the following activities:

- Aerial surveys and photos,
- Sampling of soils, water and other media within Indian country under Pueblo jurisdiction, sampling inside residences of Pueblo citizens,
- Sampling inside residences of Pueblo citizens,
- Interviews of citizens of the Pueblo and community meetings,
- Collection/compilation and analysis of data,
- Preparation of plans, reports, fact sheets and other documents,
- Other activities commonly associated with preliminary assessment and site investigation (PA/SI) work with CERCLA.

PUEBLO – By this MOU, the Pueblo commits to cooperate with EPA in the above activities and:

- Advise EPA about unique concerns that the Pueblo may have,
- Facilitate access for the preliminary assessment/site investigation (PA/SI) and other CERCLA activities on Pueblo lands and in structures owned or managed by the Pueblo,
- Assist EPA with gaining necessary access to the land and dwellings of Pueblo citizens for purposes of residential structure assessments,
- Assist EPA with address information for Pueblo residents, with the understanding that this information may be confidential,
- Comment on plans, reports and other documents, and
- Share existing environmental data, other documents and important information with EPA.

C. Consultation and Coordination

To accomplish the goals and activities described in this MOU, the parties agree that it is necessary and appropriate to establish and maintain effective communication

through various means which may include, when appropriate formal consultation between governmental officials, or informal contacts and coordination between Pueblo and EPA staff.

The following specific consultation and coordination activities are contemplated:

1. EPA plans to meet with, present information and consult with the Pueblo's elected officials and Council in October 2009, and as requested by the Pueblo.

2. EPA will coordinate with representatives of the Pueblo to identify appropriate procedures for EPA personnel to follow when entering Pueblo lands under nonemergency circumstances.

3. The Pueblo agrees to advise EPA of any particular locations where access, photography, sampling or other activities may be subject to restrictions.

4. The Pueblo agrees to advise EPA of religious ceremonies or other activities so that EPA can try to avoid unnecessary disruption of them.

5. The parties agree to establish and keep current, a list of appropriate contacts within their respective governments for communication about technical, legal and other issues.

6. The parties agree to follow the Elevation Protocol, whereby staff at EPA and the Pueblo will develop and maintain appropriate lines of communication and issues will be elevated if and when appropriate.

7. EPA agrees to coordinate with the Pueblo concerning meetings with Pueblo citizens and communities so that Pueblo representatives may attend, to the extent practicable.

8. The parties agree that EPA citizen interview protocols will be reviewed by an Institutional Review Board (IRB) approved by the Pueblo; however, enforcement related interviews, investigative activities, and information requests, and civil or criminal discovery or process shall not be subject to IRBA or Pueblo review. This IRB-Pueblo review process shall also not apply to EPA related investigations of waste, fraud, abuse, misappropriation, civil rights, or other matters that if proven could constitute a violation of federal law, regulations, or contract.

9. After collection of data, analysis and preparation of draft reports, EPA will provide to the Pueblo a copy of the draft report and allow thirty (30) days

for comment prior to finalizing the report, whenever possible. EPA will provide a copy of its final report to the Pueblo.

D. Information and data sharing

1. EPA anticipates collecting data from various sources, including but not limited to existing information and new data from the Pueblo, individual Pueblo citizens, other governmental agencies and other sources, and plans to create a database using this information. Some form of this data may ultimately be made available to the public, provided that no confidential trade secrets, commercial, or financial information of the Pueblo, which is designated as such by the Pueblo at the time such information is submitted to the EPA, shall be made available to the public by the EPA, except in compliance with the applicable provisions of 40 C.F.R. Part 2, Subpart B. EPA does not contemplate the collection of data related to the health of individual citizens; however, to the extent that EPA receives such information, the EPA will comply with personal privacy protections as applicable under the Freedom of Information Act (FOIA), 5 U.S.C. Section 552 et seq., and the Privacy Act.

2. The Pueblo will cooperate by voluntarily providing EPA with information in the Pueblo's possession that is related to past uranium mining and existing contamination, including technical data, leases, agreements, maps and other documents that the parties agree are pertinent to assess the impacts of uranium mining and to ensure the protection of human health and the environment, which shall include investigation and enforcement of the laws and regulations related to such matters, including recovery of response costs. In particular, the Pueblo will assist EPA in acquiring documents and information related to prior efforts to assess or address mining impacts on the Pueblo, including information provided to or received from the Department of Interior Bureau of Indian Affairs (BIA), copies of agreements with potentially responsible parties, and information about past reclamation efforts.

3. The Pueblo will assist EPA in identifying and meeting with elders and other individuals who may have historic information or expert knowledge about uranium mining on the Pueblo, potentially responsible parties or factors related to the resulting contamination of lands, resources, structures, and residences on the Pueblo.

4. The Pueblo, as appropriate,

   a. Advise EPA of any information that may be confidential, sensitive or restricted,

b. Designate any information it deems to be confidential business information as defined in federal regulations,
c. Redact information prior to submittal to EPA if the Pueblo determines that it is not pertinent and should not be disseminated to the public view,
d. Refrain from providing information that would impermissibly disclose religious or culturally sensitive sites, and
e. Coordinate with and advise EPA of any issues or questions related to information disclosure or sharing.

5. EPA will accommodate, to the extent permitted by applicable law, the Pueblo's concerns related to the collection, use or release of culturally sensitive or private information, and avoid potential disruption of religious ceremonies or traditionally lifeways.

6. Once provided to or otherwise in EPA's possession, the parties acknowledge that information may be subject to public disclosure in accordance with the FOIA, the Privacy Act and other applicable federal laws and policies. EPA will protect private addresses and names, confidential business information, and other information in compliance with federal law, regulations and applicable policy.

7. EPA will follow the "Regional Policy on Sharing Information with State and Tribes" dated September 9, 2004, attached and hereby incorporated by reference.

E. Specific Activities

1. Aerial Survey – The Pueblo gives permission for at least one aerial survey. EPA will coordinate with Pueblo representatives regarding potential areas to be added to the survey area. Pueblo will advise EPA of any religious ceremonies or other traditional activities that might be disrupted, and will assist EPA in finding ways to avoid unnecessary disruption of the same.

2. PA/SI – The Pueblo agrees that, upon prior notice, EPA will be provided access to Tribal lands and structures as necessary to conduct sampling and other activities typically included in a CERCLA Preliminary Assessment and Site Investigation. The PA/SI is the process used in remedial site evaluation under the National Contingency Plan prior to the listing of a site on the National Priorities List, as described at 40 C.F.R. Section 300.420.

3. Individual lands and structures – the Pueblo agrees to help EPA identify individual Pueblo citizens and their residences, and gain access to residences, buildings, wells, and other structures as necessary to take samples and investigate uranium contamination.

III. MICELLANEOUS PROVISIONS

A. Effective Date, Amendment and Termination

This MOU becomes effective upon the signature of the Parties and is to remain in effect for a period of two (2) years. This MOU may be extended or modified at any time upon the mutual written consent of the parties. Either party may terminate its participation in this MOU at any time by providing written notice to the other party at least thirty (30) days in advance of the desired termination date.

B. Notification

Whenever, under the terms of this MOU, notice is to be given or written comments or other documents are to be sent by one Party to another, the notice or comments are to be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Party in writing.

For EPA:

Mr. Samuel Coleman, P.E.
Division Director, superfund (6SF)
U.S. EPA Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

For the Pueblo:

Governor John E. Antonio Sr.
Pueblo of Laguna
P.O. Box 194
Laguna, New Mexico 87026

C. Dispute Resolution

The parties agree that disputes, if any, typically should be resolved in accordance with the Region 6 Elevation Process for EPA and Tribal Governments ("Elevation Protocol"), dated June 11, 2008, attached hereto and hereby incorporated by reference.

D. Limitations

Each party to this MOU has and reserves all rights, powers and remedies now or hereafter existing at law or in equity, or by statute or otherwise, and nothing in this MOU waives or forecloses the exercise of any such rights, powers or remedies.

All commitments made by EPA in this MOU are subject to the availability of appropriated funds and the Agency's budget priorities. Nothing in this MOU, in and of itself, obligates EPA to expend appropriations or to enter into any contract, assistance agreement, interagency agreement, or other financial obligations. Further, this MOU does not constitute rulemaking by the EPA.

The provisions of this MOU neither constitute, nor should they be construed as, a covenant not to sue or a waiver of prosecutorial discretion concerning any matter. The Parties' participation in this MOU and the CERCLA process does not constitute a waiver of any sovereign immunity by the Pueblo or the United States.

The MOU is not intended to confer any benefits or impose any obligations on the public. The MOU does not create any right or benefit, substantive or procedural, enforceable at law or in equity by any person against EPA or the Pueblo, their officers or employees, the Federal Government, or any other person. This MOU does not apply to any person outside the Federal Government or the Pueblo. The MOU does not provide any right to judicial review. The sole and exclusive remedy for any failure on the part of a party to carry out its intentions under the MOU will be the withdrawal from this MOU.

for

Al ARMENDARIZ
REGIONAL ADMINISTRATOR

22 June 2010
Date

for

JOHN E. ANTONIO SR.
GOVERNOR, PUEBLO OF LAGUNA

22 June 2010
Date

Attachments:

1. Region 6 Tribal Consultation Policy Statement
2. Memorandum on Reaffirmation of Region 6's Relationship with Tribal Governments, including the Region 6 Elevation Process for EPA and Tribal Governments ("Elevation Protocol")
3. Regional Policy on sharing Information with States and Tribes.

REGION 6 TRIBAL CONSULTATION POLICY STATEMENT

Tribal consultation is the process of seeking, discussing, and considering the views of federally recognized tribal governments at the earliest time possible in EPA Region 6's decision-making process to the fullest extent feasible and permitted by law. Tribal consultation is more than providing information about what the agency is planning to do and allowing comment. Rather, it is respectful, timely and effective interactive communication that results in the open sharing of information, the full expression of Tribal and EPA views and the consideration of tribal perspectives in a decision making process that demonstrates respect for tribal self-governance and sovereignty. The goal of each tribal consultation shall be to reach mutually agreeable solutions.

Therefore, it shall be the policy of EPA Region 6 to provide a mechanism for consultation that affords tribal leadership access to the Agency's regional leadership. This is accomplished first through government-to-government communications by officials of appropriate authority, as determined by the Regional Administrator and the Tribal Chief/Chairman. The timeframe and manner of these communications should be negotiated between EPA and the Tribe(s), consistent with any national regulations and guidance. (Separate procedures would need to apply in cases of formal enforcement actions in which the tribe is a defendant.) In the case of disagreements, EPA and Tribal employees should follow the attached elevation protocol, which will ensure that issues are brought to senior officials for decision in a timely manner. Nothing in the elevation protocol would preclude direct communication by a Tribal Chief/Chairman with the Regional Administrator. In addition, where the Region is developing a significant new policy or decision affecting Tribes, or where the Tribal Chief/Chairman believes the issue so merits, EPA and the Tribe will engage in more formal consultation, involving direct face-to-face meetings at a senior level.

Understanding that each tribe is unique, tribal governments are not prevented from developing their own EPA/Tribal Consultation Policy, Protocol or Guidance and submit it for EPA review and concurrence.

EPA United States Environmental Protection Agency

Arkansas Louisiana New Mexico Oklahoma Texas REGION 6

[Next] [Previous] [Contents by Category] [Contents by Date] [Region 6 Home]

All Employee Memorandum

***Category:** Freedom of Information Act (FOIA); Regional Policy*

Effective Date: September 9, 2004

Contact: Lawrence Starfield

Regional Policy on Sharing Information with States and Tribes

This is being sent as R6 All Employee Memo - Please do not reply to this mass mailing
This memo and all Region 6 "All Employee Memos" may be viewed on the Region 6 Intranet

NO HARD COPY TO FOLLOW

September 9, 2004

MEMORANDUM

SUBJECT: Regional Policy on Sharing Information with States and Tribes

FROM: Lawrence E. Starfield */s/ Larry Starfield*
Deputy Regional Administrator (6RA-D)

TO: All Region 6 EPA Employees

The Region frequently receives information which is of interest to our partner State or Tribal government environmental agencies. It is Region 6 policy not to require formal Freedom Of Information Act (FOIA) requests from our State and Tribal governments which seek environmental information. At the same time, when we release information to our partner agencies without a FOIA request, we should be careful to release only what is generally available to the public under FOIA.

For instance, information with privacy implications (names, home addresses, etc.) should not be released, either under FOIA or under this Region 6 policy. We should be mindful that any inadvertent release of internal deliberative materials or enforcement materials may be interpreted as a "waiver" of governmental privileges, thereby reducing our capacity to withhold such materials in the future.

Therefore, the main points to keep in mind are:

• We do not require formal FOIA requests from States or Tribes for publicly available documents, and we will handle such requests promptly, without charging a fee for searching and copying.

• We should only release the same open information which we would have released to the general public under FOIA.

Instruction on this policy will be added to the quarterly "FOIA Overview" training course offered by FOIA Officer Jerva Durham (ext. 6597) and one of our FOIA attorneys, Paul Witthoeft (ext. 8057). Jerva and Paul are also the persons to contact for assistance when handling a State or Tribal request to ensure consistency with the principles of release under FOIA. Their alternates are Maryann Morales (ext. 6598) and attorney Robyn Moore-Johnson (ext. 8054).

I appreciate your help in advancing the partnership relationships with our States and Tribes. If you have any questions or comments concerning our policy on sharing information with States and Tribes, please feel free to email them to R6Suggest@epa.gov.

[Next] [Previous] [Contents by Category] [Contents by Date] [Region 6 Home]

MEMORANDUM

SUBJECT: Reaffirmation of Region 6 Relationship with Tribal Governments

FROM: Regional Administrator

TO: All Region 6 Employees

The United States has a unique, legal relationship with Tribal governments. This relationship, built on mutual respect and the recognition of tribes as sovereigns, is governed by treaties, statutes, Executive Orders and court decisions. EPA has its own tribal policy that addresses and defines the relationship with our Tribal partners in protecting human health and the environment. Administrator Jackson reaffirmed this policy in July 2009.

The purpose of this memorandum is to reaffirm our regional commitment to a strong partnership with Tribal governments. As with any partner, we must continue to ensure the close involvement and consultation with Tribal governments in making decisions that affect their land or have tribal implications. In addition, and in the sprit of mutual respect, we will follow the tribes' communication and visitation protocols. There are 66 Tribes in our Region, and each may have a different protocol. We suggest that you contact the Office of Environmental Justice and Tribal Affairs (OEJTA) prior to making your initial visit to a tribal nation. We also invite you to take "Working Effectively with Tribal Governments" training which you can access online at:

http://www.tribalgov.golearnportal.org/

Every EPA employee should reinforce our Agency's commitment to the government-to-government relationship between Federal and Tribal governments. We should also continue to recognize Tribal governments as sovereign entities with authority and responsibility for their populations and land. Please help us ensure that our daily interactions with Tribal partners reflect this commitment.

Attachment

.....ATTACHMENT.....

Region 6 Elevation Process for EPA and Tribal Governments

Pursuant to the federal trust responsibility and EPA's Indian Policy, Region 6 is committed to building cooperative partnerships with Tribes. As with any relationship, misunderstandings and disagreements may arise from time to time. EPA will seek to resolve issues in a timely manner with our tribal partners on a government-to-government basis. The following process is designed to effectively elevate issues through EPA and Tribal organizations in an effort to arrive at mutually agreeable solutions.

Elevation of an issue will typically follow this process:

1. An issue is raised by a tribal Environmental Staff or Director to the appropriate EPA Project Officer or program staff. If it cannot be resolved at this level within 15 days, then

2. The issue will be put in writing by the involved parties. EPA staff will elevate the issue to their supervisor(s) and management to seek a solution with Tribe's Environmental Director. If it cannot be resolved within 30 days, then

3. The issue will be formally elevated through EPA Senior Staff and senior tribal management, with final elevation to the Regional Administrator and the appropriate Tribal leader. Resolution should be accomplished within 30 days.

Notes: (a) This elevation process is not applicable in cases of formal enforcement actions in which the tribe is a defendant.

(b) If an EPA program has an issue with a tribe that needs resolution, program staff should contact the Ombudsman for assistance in negotiating with tribal staff. If it remains unresolved after 30 days, the Division Director should work with the OEJTA Director to communicate directly with tribal leaders. Negotiations with tribes should incorporate respect for cultural protocols. These can be determined with the assistance of the Ombudsman, Associate Director for Tribal Affairs, and OEJTA Director.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

February 6, 2018

The Honorable James Floyd
Principal Chief
Muscogee (Creek) Nation
P.O. Box 580
Okmulgee, OK 74447

RE: Wilcox Oil Company Superfund Site

Dear Principal Chief Floyd:

The purpose of this letter is to extend an invitation to the Muscogee (Creek) Nation to conduct government-to-government consultation with the U.S. Environmental Protection Agency (EPA) Region 6 regarding oil refining impacts at the Wilcox Oil Company Superfund Site. The EPA anticipates proposing a remedial action to address specific source materials at the site around April 2018. The purpose of the consultation is to provide information to the Muscogee (Creek) Nation's leadership about the proposed action and to solicit input.

The consultation will be conducted in accordance with the EPA Policy on Consultation and Coordination with Indian Tribes. The EPA's anticipated timeline for the consultation and coordination is from the date of this letter until 30-days. During this time, the EPA will request a meeting with Muscogee (Creek) Nation leadership for consultation and will continue to work at the staff level to provide information to the Muscogee (Creek) Nation environmental staff.

The draft Source Control Proposed Plan (Plan) has been provided electronically to Muscogee (Creek) Nation environmental staff. The Plan includes the evaluation of three options and is proposing Excavation and Offsite Disposal for the nine (9) identified source areas. The total estimated volume of source material is approximately 34,622 cubic yards at an estimated cost of $5,260,232.

We value the observations, insights and recommendations of the Muscogee (Creek) Nation leaders and members, and pledge to remain engaged as we continue to work on this site. Should you have any questions or concerns, please do not hesitate to contact me at (214) 665-6701, or your staff may contact Katrina Higgins-Coltrain at (214) 665-8143 or coltrain.katrina@epa.gov. If you have any questions about the consultation process, please contact Randy Gee, Region 6 Office of Environmental Justice, Tribal and International Affairs, at (214) 665-8355.

Sincerely,

Carl E. Edlund, P.E.
Director
Superfund Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

Honorable Fred S. Vallo
Governor
Pueblo of Acoma
P.O. Box 309
Acoma, NM 87034

Dear Governor Vallo:

The purpose of this letter is to provide the Pueblo of Acoma with the draft Environmental Protection Agency (EPA) Region 6 2015-2020 Five-Year Plan for the Grants Mining District and to continue our solicitation of input from the Pueblo. The draft Plan describes progress achieved over the past five years in addressing human health and environmental impacts from uranium mining in the Grants Mining District, and proposes priorities for the 2015 to 2020 time period.

We value the observations, insights and recommendations of the Pueblo's leaders, staff, and members and will remain engaged as we continue our progress to remedy the legacy of uranium contamination in the Grants Mining District. Region 6 staff have endeavored to keep the Pueblo's environmental staff apprised of our activities in development of the goals outlined in the next Five-Year Plan.

I would like to extend an invitation to conduct government-to-government consultation as we work to complete the second Five-Year Plan. If initiated, the consultation would be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes*. EPA's anticipated timeline for the consultation period is expected to extend until November 13, 2015. Ms. Lisa Price, Region 6 Grants Mining District Coordinator, will remain the Superfund Program's point of contact for ongoing staff-level coordination. Following the public comment period, EPA anticipates that a final plan will be issued by December 2015.

Should you have any comments, questions, or concerns about the draft Five-Year Plan, please don't hesitate to contact me at (214) 665-6701 or your staff may contact Ms. Price at (214) 665-6744 or price.lisa@epa.gov. If you have any questions about the consultation process, please contact Randy Gee, Region 6 Tribal Affairs Director, at 214-665-8355.

Sincerely,

Carl E. Edlund P.E.
Director
Superfund Division

Enclosure:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

Honorable Virgil A. Siow
Governor
Pueblo of Laguna
22 Capital Drive
Laguna, NM 87026

Dear Governor Siow:

The purpose of this letter is to provide the Pueblo of Laguna with the draft Environmental Protection Agency (EPA) Region 6 2015-2020 Five-Year Plan for the Grants Mining District and to continue our solicitation of input from the Pueblo. The draft Plan describes progress achieved over the past five years in addressing human health and environmental impacts from uranium mining in the Grants Mining District, and proposes priorities for the 2015 to 2020 time period.

We value the observations, insights and recommendations of the Pueblo's leaders, staff, and members and will remain engaged as we continue our progress to remedy the legacy of uranium contamination in the Grants Mining District. Region 6 staff and Pueblo's environmental staff have remained engaged throughout the implementation of 2010-2015 Plan. The Pueblo's Environmental Director Ringia was also engaged in development of the goals outlined in the next Five-Year Plan. We appreciate your staff's input and look forward to continuing this productive working relationship.

I would like to extend an invitation to conduct government-to-government consultation as we work to complete the second Five-Year Plan. If initiated, the consultation would be conducted in accordance with the *EPA Policy on Consultation and Coordination with Indian Tribes*. EPA's anticipated timeline for the consultation period is expected to extend until November 13, 2015. Ms. Lisa Price, Region 6 Grants Mining District Coordinator, will remain the Superfund Program's point of contact for ongoing staff-level coordination. Following the public comment period, EPA anticipates that a final plan will be issued by December 2015.

Should you have any comments, questions, or concerns about the draft Five-Year Plan, please don't hesitate to contact me at (214) 665-6701 or your staff may contact

Ms. Price at (214) 665-6744 or price.lisa@epa.gov. If you have any questions about the consultation process, please contact Randy Gee, Region 6 Tribal Affairs Director, at 214-665-8355.

Sincerely,

Carl E. Edlund, P.E.
Director
Superfund Division

Enclosure:

Water Division

TRIBAL TRAINING

EPA / TRIBAL WATER QUALITY DATA ASSESSMENT TOOL PILOT PROJECT

EPA Region 6, in partnership with EPA Headquarters and 20 tribes nationally (10 Region 6) are piloting the development of the Water Quality Assessment Tool (ATTAINS). The ATTAINS tool will allow tribes to report national data on the status of water quality on tribal lands. The ATTAINS Pilot workgroup has been communicating monthly, focusing on the reporting needs that tribes will have when using ATTAINS. The workgroup held a training workshop on October 16-18, 2017 to demonstrate the use of the new assessment tool for tribal staff. The training provided information on water quality standards, QAPP development, and assessment methodology for evaluating water quality data. Tribal staff received hands on experience building an ATTAINS report for their respective tribal program which they will use for end of year reporting for FY2017***. Laura Hunt, 214-665-9729; Lindsey Griffin, 214-665-2797; Mike Schaub, 214-665-7314; Selena Medrano, 214-665-2776; TeAndra Taylor, 214-665-8346; Laura Shumway 202-566-2514***

WATER QUALITY MONITORING PROGRAM TRAINING

EPA Region 6 staff conducted a 2-day training in October in Oklahoma to train beginner to intermediate level tribal staff in the topics related to water quality monitoring programs. Topics that were covered include Monitoring Design and Strategy, Quality Assurance Project Plans, Multi-parameter sonde-pre and post calibration, sonde maintenance and troubleshooting, stream sampling demonstrations, assessment methodologies, tribal assessment reports, and data analysis tools and uploading data. ***Laura Hunt, 214-665-9729; Lindsey Griffin, 214-665-2797; Mike Schaub, 214-665-7314; Robert Cook, 214-665-7141***

NPDES PERMITS

STATUS OF NPDES PERMITS

During fiscal year 2017, EPA Region 6 will or may be working on several NPDES permits in New Mexico and Louisiana located on or in proximity upstream to potentially affected Tribes: New Mexico: Roca Honda Resources Uranium Mine; Chama WWTP, Espanola WWTP; Albuquerque-Bernalillo Co. WUA WWTP, Grants WWTP, and Taos WWTP; Louisiana: Chitimacha WWTP and Choctaw Pines Casino WWTP. General Permits already proposed or in the works include: Hydrostatic Test Temporary Discharge General Permit (OK & TX) and a general permit for Municipal Separate Storm Sewer Systems (MS4) in New Mexico (primarily for those in the Santa Fe, Las Cruces, El Paso, Los Lunas, and Farmington areas). Affected tribes will receive copies of the draft permits at the time of proposal for review during the public comment period or CWA Section 401 certification as appropriate. Tribal consultation will be available to the affected tribes. ***Brent Larsen, 214-665-7523***

LOS ALAMOS COUNTY MUNICIPAL SEPARATE STORM SEWER (MS4) DESIGNATION PETITION

EPA proposed to designate portions of Los Alamos County as a municipal separate storm sewer system (MS4), which establishes requirements to reduce pollution carried by storm water run-off and will help restore waters in the area that are too polluted. The proposed designation is in response to a petition filed by Amigos Bravos for a determination that storm water discharges in

Los Alamos County are contributing to violations of water quality standards in certain impaired waters and therefore, require a discharge permit and designation as an MS4. After review of the petition, information provided by LANL and Los Alamos County, and the state's water quality assessment, EPA made a preliminary determination that stormwater discharges on Los Alamos National Lab (LANL) property and urban portions of Los Alamos County result in exceedances of state water quality standards. The proposal was published in the Federal Register on March 17, 2015. A final decision is expected fall 2018, concurrent with development of a permit(s) with input from stakeholders ***Nasim Jahan 214-665-7522***

LOS ALAMOS NATIONAL LABORATORY (LANL) NPDES PERMIT

EPA Region 6 proposed reissuance of the NPDES permit for stormwater discharges from Los Alamos National Laboratory in Los Alamos, New Mexico in March 2015 and the extended public comment period ended June 25, 2015. The individual storm water permit regulates storm water runoff from about 400 Solid Waste Management Units (SWMUs) and Areas of Concern. LANL has installed over 1000 BMPs to eliminate or mitigate runoff from those sites. The current permit has been administratively continued. EPA has been working with stakeholders including permittees, environmental/citizens groups and New Mexico Environment Department over the last year in the development of permit conditions. EPA held a public meeting prior on the proposal in Los Alamos on May 6, 2015. Final action on the permit is expected fall 2017. ***Isaac Chen 214-665-7364***

UNDERGROUND INJECTION CONTROL

INDUCED SEISMICITY

Over the last several years, there have been abrupt increases in earthquakes in some oil and gas production areas. These areas include Arkansas, Kansas, Oklahoma, and Texas, as well as other oil and gas producing states. Of particular note is a dramatic increase in both the numbers of earthquakes in Oklahoma and Kansas, along with their magnitudes. EPA finalized the Underground Injection Control (UIC) National Technical Workgroup (NTW) report, *Minimizing and Managing Potential Impacts of Injection-Induced Seismicity from Class II Disposal Wells: Practical Approaches*. This report was developed cooperatively with state members of the workgroup to protect underground sources of drinking water and was released as final in February 2015. Since release of the report, EPA Region 6 has been providing focused technical support to the Oklahoma Corporation Commission (OCC) in its efforts to address potential induced seismicity. In an effort to stem the increasing earthquake trends, OCC has periodically increased its level of response, culminating in a broad injection volume restriction area for disposal wells after several damaging Magnitude 4 events early this year. The Region ramped up its level of concern over the level of seismicity in Oklahoma and North Texas through its 2015 annual evaluations of the UIC programs for OCC and the Railroad Commission of Texas. Both of these reports generated substantial media coverage because of seismicity concerns. The Region also responded quickly over the Labor Day weekend to shut in Osage disposal wells near the 5.8 Magnitude event near Pawnee, Oklahoma. Since September 2016, the frequency of events has continued to sharply decline and no magnitude 4+events have occurred since November. The Region is cautiously optimistic about this trend, and recent OCC actions. ***Philip Dellinger, 214-665-8324***

DRINKING WATER

REVISED TOTAL COLIFORM RULE AND LEAD AND COPPER RULE

Since April 1, 2016, the Revised Total Coliform Rule (RTCR) became effective for all public water systems. The RTCR replaces the old Total Coliform Rule (TCR) where some of the requirements remain the same (such as frequency and number of routine sampling) and some are new (such as level 1 and 2 assessments). Region 6 and its Technical Assistance Providers continues to deliver RTCR and other regulatory training (such as the Lead and Copper Rule) to tribes and provided technical assistance to help tribes for new rules and refresh tribes on older rules. All tribal water systems under Region 6 completed their RTCR Sampling Plans and all tribal water systems are monitoring under RTCR accordingly. Regarding the Lead and Copper Rule, Region 6 shared the February 2016 Sampling Method Clarification Protocol with tribes and encouraged the tribes to take additional (special) samples when their routine lead sample results approach half (7.5 ppb) of the action level (15 ppb). The purpose of this is to encourage tribes to be proactive in preventing an action level exceedance. Region 6 appreciates the collaboration and cooperation of tribes on the implementation of these two rules, which have been at the forefront of Drinking Water discussions in 2016 and in the coming year. ***Meaghan Bresnahan, 214-665-8354, Andrea Abshire, 214-665-6076, Jatin Mistry, 214-665-7483, John Baker, 214-665-7542***

SANITARY SURVEYS AND OVERSIGHT

On the Sanitary Survey front, Region 6 and its technical assistance providers continue to conduct surveys every three years under the Groundwater Rule (GWR) and Surface Water Treatment Rules (SWTRs). In 2016, Region 6 developed a more efficient method and database for tracking, organizing, and updating significant deficiencies; this facilitated our ability to reach out to tribes and provide reminders and technical assistance (on the phone or on site) on correcting significant deficiencies at the water systems. Region 6 appreciates the photos and documentation that have been submitted to date to clear the deficiencies. This effort is helping prevent potential 'failure to correct deficiencies' violations. In addition, Region 6 has been conducting compliance reviews on tribal drinking water projects submitted by the Tribe and/or IHS. These reviews allow EPA and the Tribe and IHS to proactively collaborate to prevent compliance issues before project construction begins. EPA encourages Tribes to notify EPA when there are water system modifications or new construction and to continue submitting drinking water infrastructure design projects for EPA compliance reviews. All of these activities, including the trainings that Region 6 provided, are part of Region 6's increased oversight of states and tribal drinking water systems to ensure compliance under the Safe Drinking Water Act. ***Miguel Moreno, 915-533-7273, Meaghan Bresnahan, 214-665-8354, Jose Lugo-Figueroa, 214-665-6462, Jose Rodriguez, 214-665-8087, Jatin Mistry, 214-665-7483, Andy Waite, 214-665-7332, John Baker, 214-665-7542***

PUEBLO OF SAN FELIPE WASTEWATER SYSTEM IMPROVEMENTS

The Pueblo of San Felipe's existing Kubota membrane treatment plant was built in 2008 to treat up to 300,000 gallons per day of wastewater. The treatment plant is designed to provide near-drinking water quality effluent to be used by the Pueblo for irrigation if desired. The plant treats wastewater collected throughout the Pueblo which is carried to the plant through a series of collection lines and interceptor sewers.

- **Project Objectives and Needs**
  - In order to more efficiently treat existing wastewater flows, San Felipe Pueblo will increase the capacity of its Wastewater Treatment Plant (WWTP) through the purchase and installation of additional membrane units for the Pueblo's Membrane Bioreactor System (MBR) to improve efficiency of the system.
  - WWTP Improvements – Improvements will be made to the WWTP Ultra Violet (UV) disinfection system by isolating the UV system in a small room outside, but directly adjacent to the WWTP which will not share the same, somewhat corrosive, atmosphere.
  - Improvements to Lift station #1 adjacent to the WWTP and installation of a filtration system / manhole to catch debris before waste is sent to the existing WWTP.
- **Environmental Results or Benefits of Project**:
  - Increase number of membranes in Membrane Filtration System will not increase flows, but will allow the plant to operate more efficiently
  - WWTP Improvements – UV Disinfection system isolation will improve efficiency and will help ensure proper disinfection of effluent
  - Lift Station and filtration system upgrade will improve the operation of the plant, increasing efficiency and keep the WWTP from shut-downs
- **Project Schedule**:
  - The new membrane installation and UV system final design is complete and work is projected to be done during calendar year 2017 and 2018.
  - Lift Station and filtration system upgrade final design has to be done and construction will be performed in calendar year 2018.
  - The Pueblo of San Felipe has already incurred some cost associated with the project and are expected to request approval of pre-award costs. In addition, the Pueblo is working on the project procurement.
- **Project Funding:**

The Pueblo of San Felipe received a congressional appropriation in the amount of $165,000 which is being supplemented with Pueblo funding for a total project cost of $300,000.

REVIEW OF WATER INFRASTRUCTURE PLANS

If a tribe is considering having new infrastructure built or added to current infrastructure, such as a well or a treatment system, EPA strongly encourages the tribe and/or IHS to send their engineering design plans to EPA Region 6 for compliance reviews. We review these plans to make sure the new infrastructure will be in line with the regulations and so that the system does not receive significant deficiencies during subsequent sanitary surveys. The point of contact for plan reviews is Jose Lugo-Figueroa, who can be reached at lugo-figueroa.jose@epa.gov or 214-665-6476; please send Jose design plans in advance of building new infrastructure and we will work with the tribe to help make sure their new infrastructure produces SDWA-compliant water. ***Jose Lugo-Figueroa, 214-665-6462, Jose Rodriguez, 214-665-8087, Meaghan Bresnahan, 214-665-8354***

TRIBAL FUNDING

STATE REVOLVING FUNDS TRIBAL SET-ASIDES

The Clean Water Indian Set Aside (CWISA) and the Drinking Water Tribal Set Aside (DWTSA) completed the FY 2017 award process.

The Region's 2017 CWISA program awarded $2,372,100. Six projects were selected in coordination with the Oklahoma City Indian Health Service (IHS) office; Tonkawa Tribe/Pawnee Nation ($130,000), Comanche Nation ($200,000), Kickapoo Tribe ($12,800), Sac and Fox Nation ($45,800), Citizen Potawatomi Nation ($153,000), and the Tonkawa Tribe /City of Blackwell area Tribes ($280,500). One project was selected in coordination with the Albuquerque IHS office; Pueblo of Zuni ($1,550,000). FY 2017 was the first time the CWISA program allocated $2 million from the program to assist in technical and training support across the nation.

The Region's 2017 DWTSA program awarded $1,889,000. Three projects were selected in coordination with the Oklahoma City IHS office; Ponca Tribe ($169,250), Sac and Fox Nation ($214,000), and the Kickapoo Tribe ($89,000). Three projects were selected in coordination with the Albuquerque IHS office; Pueblo of Acoma ($629,000), Mescalero Apache Tribe ($41,750), and Mescalero Apache Tribe ($746,000).

Final awards to the successful Tribal recipients of the projects selected and the associated CWISA and/or DWTSA were funded by September 2017. ***Dena Hurst, 214-665-7283, Sal Gandara, 214-665-3194***

WETLAND PROGRAM DEVELOPMENT GRANTS - SEVERAL REGION 6 TRIBES SELECTED

The 104(b)(3) Wetland Program Development Grants are competitive grants that are part of the EPA Enhancing State and Tribal Programs effort. Funds from these grants can be used to develop and implement a Wetlands Program Plan (WPP). The Core Elements Framework (CEF) outlines the 4 core elements a WPP may include, which are: Monitoring and Assessment, Regulatory Activities including 401 Certification, Voluntary Restoration and Protection, and Water Quality Standards for Wetlands. However, the development of a WPP allows tribes to implement the CEF based on their individual program goals and available resources. Under the 2017/2018 Region 6 solicitation, the Pueblo of Jemez was selected to receive funds. The Region 6 Wetlands Program will be soliciting new grant proposals in FY2019. Our grants are solicited on a two-year cycle. For more information, please see https://www.epa.gov/wetlands/wetland-program-development-grants and https://www.epa.gov/wetlands/what-enhancing-state-and-tribal-programs-effort

Ten percent of total national WPDG funds will be set aside for a national, tribal-only competition. (About $1.3 million per year). Tribes may apply to both RFPs with the same (or different) proposals. We anticipate the RFPs to be very similar in regards to requirements and selection criteria. Under the 2017/2018 solicitation Seneca Cayuga Nation and Kickapoo Tribe of Oklahoma were selected to receive 104(b)(3) wetlands grants.

Alison Fontenot, 214-665-7482; Wanda Boyd, 214-665-6696; Sondra McDonald, 214-665-7187

TREATMENT-AS-A-STATE FOR CLEAN WATER ACT GRANTS

PUEBLO OF ZIA TAS FOR CLEAN WATER ACT 106

The Pueblo of Zia submitted a Treatment -As-A-State TAS application for CWA 106 on January 23, 2017. The TAS CWA 106 application was approved June 16, 2017.
Samuel Reynolds, 214-665-6682

CADDO NATION OF OKLAHOMA TAS FOR CLEAN WATER ACT 106

Caddo Nation submitted a Treatment -As-A-State TAS application for CWA 106 on August 14, 2015. The TAS CWA 106 application was approved September 29, 2016.
Samuel Reynolds, 214-665-6682

ABSENTEE SHAWNEE TAS FOR CLEAN WATER ACT 319(H)

Absentee Shawnee Tribe submitted a Treatment-As-A-State (TAS) application May 2016 for CWA 319(h) Treatment-As-A-State (TAS) non-point source program. The TAS CWA 319 (h) application was approved on October 10, 2017.
Samuel Reynolds, 214-665-6682

TONKAWA TRIBE TAS CLEAN WATER ACT 319(H)

Tonkawa Tribe submitted a Treatment-As-A-State (TAS) application for the CWA Section 319(h) nonpoint source program in June 2016. The TAS CWA 319 (h) application was approved on October 10, 2017.
Samuel Reynolds, 214-665-6682

PUEBLO OF LAGUNA TAS FOR CLEAN WATER ACT 319(H)

The Pueblo of Laguna submitted a Treatment-As-A-State (TAS) application for CWA Section 319(h) nonpoint source program in June 2016. EPA Region 6 is continuing to work with the Pueblo on their TAS application submittal.
Samuel Reynolds, 214-665-6682

THLOPTHOLOCCO TRIBAL TOWN

The Thlopthlocco Tribal Town submitted a Treatment -As-A-State TAS application for CWA 106 on 27 January 2017. EPA Region 6 is continuing to work with the Tribal Town on their TAS application submittal.
Samuel Reynolds, 214-665-6682

TREATMENT-AS-A-STATE FOR REGULATORY PROGRAMS

TREATMENT IN THE SAME MANNER AS A STATE (TAS) DETERMINATIONS FOR CLEAN WATER ACT §303(C) AND §401

Region 6 is reviewing an application for treatment in the same manner as a state (TAS) for the Clean Water Act (CWA) water quality standards (§303(c)) and water quality certification (§401) programs from the Citizen Potawatomi Nation (submitted in fall 2014). Approval of a TAS application means that the Indian tribe is eligible to administer the water quality standards

program under CWA §303(c), and is likewise eligible for purposes of certification under CWA §401. EPA's public comment and Tribal consultation period on the Citizen Potawatomi Nation's application concluded in February 2017. Region 6 received responses from the state of Oklahoma, the Sac and Fox Nation and several federal agencies. Region 6 has prepared a decision document, which has been submitted to management within Region 6 and at EPA Headquarters for review. ***Diane Evans, 214-665-6677; Tina Alvarado, 214-665-2709***

CWA REGULATIONS

BASELINE WATER QUALITY STANDARDS

In June 2016, EPA initiated pre-rulemaking consultation and coordination with Indian tribes to explore an action that would establish federally-promulgated baseline water quality standards (WQS) for waters on Indian reservations that do not have EPA-approved WQS effective under the Clean Water Act. EPA published an Advance Notice of Proposed Rulemaking (ANPRM) on September 29, 2016, to receive specific and clear guidance from tribal governments and other interested parties on a proposed future federal promulgation for tribal water quality standards. (Note: EPA's current thinking is that off-reservation allotment lands for individual members would not be covered, due to difficulties in identifying these parcels with certainty in the near term.) The 90-day comment period on the ANPRM closed on December 28, 2016. EPA received comments from 35 entities, including Indian tribes, states, individuals and other organizations. EPA is reviewing these comments, along with input received from the earlier Tribal consultation periods, and will brief the new administration for further direction. Information is available at: https://www.epa.gov/wqs-tech/advance-notice-proposed-rulemaking-federal-baseline-water-quality-standards-indian or through the regulatory docket (https://www.regulations.gov/docket?D=EPA-HQ-OW-2016-0405). ***Diane Evans, 214-665-6677; Tina Alvarado 214-665-2709***

2017 CWA 404 NATIONWIDE PERMIT REISSUE PROCESS:

EPA is the agency required to address water quality certification for tribes that have not received treatment in the same manner as a state for the water quality standards and CWA 401 certification program. For the Corps of Engineers' 2017 Nationwide Permits (NWPs), Region 6 only issued "blanket" certification for the 52 NWPs when a tribe specifically requested that we do so. Multiple tribes did make that request. For the remainder of tribes, when a project requires a Clean Water Act, Section 404 NWP from the Corps of Engineers, application must also be made to EPA for the 401 certification of that project before construction can begin. EPA will contact the tribe involved to make sure they are aware of the project and have had adequate opportunity to express their concerns about potential water quality impacts from the project. Once that has occurred EPA will proceed with 401 certification.

At any time a tribe wishes to bypass this extra review step, Region 6 is still willing to issue the "blanket" certification for all 52 of the NWPs from the request date through March, 2022, when the five-year NWP expiration date is reached.
Thomas Nystrom, 214-665-8331

WATERS OF THE UNITED STATES

On February 28, 2017, President Trump issued an Executive Order (E.O.) on "Restoring the Rule of Law, Federalism, and Economic Growth by reviewing the 'Waters of the United States'

Rule", directing the Administrator of the EPA and the Assistant Secretary of the Army for Civil Works to review the final Clean Water Rule published in 2015, and publish for notice and comment a proposed rule rescinding or revising the rule. To meet the objectives of the E.O. in a clear and expeditious approach, the agencies have decided on a two-step approach:

1) an initial rulemaking to rescind the 2015 rule and reinstate the regulatory approach that has been in place for decades, and thus maintains the status quo; and
2) a rulemaking to revise the definition of waters of the U.S. consistent with direction in the E.O.

The agencies have taken several actions consistent with the E.O. and our two-step approach:

Step 1: The Step One proposed rule: Definition of "Waters of the United States" – Recodification of Pre-existing Rules, was published for public comment in the Federal Register on July 27, 2017, and the comment period closed on September 27, 2017. Over 600,000 comments were received by the agencies, and comments are currently being posted to the docket, which can be accessed at http://www.regulations.gov, docket number EPA-HQ-OW-2017-0203-0001.

Step 2: Per EPA policy, we initiated consultation with tribal governments on April 20, 2017 regarding the new definition to be developed under Step 2. The agencies held a series of meetings with various groups as part of the consultation processes and are now posting for public review each of the letters received as part of the consultation processes. Letters received from Tribes and states are posted on the EPA WOTUS Rule website under "Rulemaking Process".

In addition, the agencies are currently holding a series of public meetings, via webinar and in person, to hear recommendations from stakeholders. This schedule may be found on the WOTUS rulemaking process website under "Outreach Meetings". Finally, written recommendations regarding the Step 2 Rulemaking to revise the definition of "Waters of the United States" may be submitted until November 28, 2017 to a non-regulatory docket that the agencies have established. The recommendations should be submitted to http://www.regulations.gov, identified by Docket ID No. EPA-HQ-OW-2017-0480.

Until a new regulation is in place, the agencies will continue to implement the longstanding regulatory definition, consistent with the 2003 and 2008 agency guidance interpreting that definition in light of the *SWANCC* and *Rapanos* decisions, pursuant to the Sixth Circuit stay of the Clean Water Rule.

More information about the Waters of the U.S. Rulemaking can be found at https://www.epa.gov/wotus-rule
Alison Fontenot, 214-665-7482

Multimedia Division

Air Programs Branch

Tribal Consultation and Coordination:

Treatment as a State (TAS) for the Clean Air Act (CAA): On August 14, 2017, Region 6 approved the Quapaw Tribe's application requesting CAA authority under Section 105, Section 505(a)(2), Section 107(d)(3), and CAA §126(a) and (b). In addition to the Quapaw Tribe, four other Tribes in Region 6 have received TAS approval for CAA authorities including Cherokee Nation, Pueblo of Laguna, Kaw Nation, and the Peoria Tribe of Oklahoma. ***Frances Verhalen, 214-665-2172.***

Oklahoma NESHAPs Delegation Tribal Consult Letter: EPA Region 6 transmitted a letter November 1, 2017, to Oklahoma Tribal Nations inviting them to consult on Oklahoma Department of Environmental Quality's (ODEQ) request to update their delegation of NESHAP standards. In addition to the requesting an update to its delegation over non-tribal lands within the State, ODEQ has requested delegation for the implementation and enforcement of the NESHAPs for all sources (both part 70 and non-part 70 sources) located on non-reservation areas of Indian country, including individual allotments and dependent Indian communities. EPA would treat as reservations trust lands validly set aside for the use of a Tribe even if the trust lands have not been formally delegated a reservation and would continue to implement the NESHAPS within those areas. The consultation letter includes a projected consultation time line from Region 6 with an invite to participate in formal, as well as informal discussion throughout EPA's delegation process. Oklahoma has indicated to EPA that they currently notify electronically all Tribes of in-state major source draft permits (Tier II and Tier III permits). Region 6 began the government-to-government consultation by holding a conference call on November 2, 2017. ***Jeff Robinson, 214-665-6435.***

Tribal Permitting:

On June 5, EPA issued a 90-day stay of the fugitive emissions, pneumatic pumps, and professional engineer certification requirements from the 2016 New Source Performance Standards for the oil and natural gas industry. Additional information on the stay and reconsideration available at https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry.

Region 6 Tribal Permits:

All EPA proposed permits will be noticed via e-notice on the Region 6 webpage at https://www.epa.gov/caa-permitting/caa-permitting-epas-south-central-region.

In September, Williams Four Corners LLC. (Williams) informed EPA of a fire to the Ojito compressor station on Jicarilla Apache. Williams had previously requested that the existing Part 71 operating permit renewal be changed to a synthetic minor new source review (NSR) permit. The compressors at the Ojito facility will be permanently dismantled and removed. Williams

will be replacing the 3-825 hp engines with one new1100 hp engines. Williams is requesting to utilize the oil and natural gas FIP permit-by-rule regulation promulgated on May 12, 2016, [https://www.epa.gov/tribal-air/final-federal-implementation-plan-oil-and-natural-gas-true-minor-sources-and-amendments] to install the new compressor engine and tanks. EPA approved Williams request on October 17, 2017. The information on the new Ojito compressor station will be posted at: https://www.epa.gov/caa-permitting/fip-oil-and-gas-epas-south-central-region

EPA issued the renewal of the Part 71 permit for Los Mestenios Compressor Station, located on Jicarilla Apache on August 9, 2017 and the information is at: https://www.epa.gov/caa-permitting/part-71-operating-permits-jicarilla-apache-los-mestenios-compressor-station

EPA is drafting a synthetic minor permit for the Lindrith compressor station for an increase in condensate throughput. Condensate increases are expected with the change in composition of the natural gas from the gathering lines of the gas production sites. Currently the facility is operating with a Part 71 permit.

We continue to provide early notification to the adjacent tribal nations in case they wish to consult on a permitting action in accordance with the Region 6 Consultation and Coordination Policy with Federally Recognized Indian Tribes. ***Bonnie Braganza, 214-665-7340***

Tribal Funding:

FY2018 Tribal Air Funding: In FY2018, EPA Region 6 expects to support assistance agreements under statutory provisions of the Clean Air Act Section 103 and Section 105. In December 2017, the Office of Environmental Justice and Tribal Affairs (OEJTA) will send a collective email to Tribal Leaders including a solicitation for proposals for air projects and program activities to be conducted in FY2019. Proposals will be expected in February 2018.

In March 2018, proposals will be sent to a panel of technical and administrative Air Program staff for recommendations of approval, partial approval, and non-approval. Applicants will be notified via email of their specific recommendation and the basis for that recommendation by May 1, 2018. All awards will be finalized by September 30, 2018.

Note: The Tribal Air Guidance manual, Protecting Tribal Air Quality Options and Opportunities, is available to Region 6 Tribes as a tool to assist in project and grant proposal development for future Tribal Air funding opportunities. Due to changes with EPA's internet, the guidance document is not currently posted. However, an electronic copy of the document is shared with Region 6 tribes, annually, and may be requested throughout the year. ***Aunjaneè Gautreaux, 214-665-7127.***

Diesel Emissions Reduction Act (DERA) FY2018 Tribal Funding: Status of tribal funding has not been determined. ***William Rhea, 214-665-6767.***

Current and Upcoming Regulations:

Designations under the 2015 Ozone Standard: On August 2, EPA withdrew the extension to the designations date. A new schedule for designations has not been announced. We will share more specific information as it becomes available. For additional information on air quality designations for ozone, please visit our website at https://www.epa.gov/ozone-designations. ***Carrie Paige, 214-665-6521.***

Designations for Sulfur Dioxide: EPA is developing designations for the 2010 sulfur dioxide (SO_2) National Ambient Air Quality Standard (NAAQS) in four parts: Round 1) Existing monitoring data; Round 2) Consent Decree (CD) listed sources; Round 3) Data Requirement's Rule (DRR) air modeling; and Round 4) air monitoring for all remaining sources.

In Round 2, EPA proposed but did not finalize a designation to nonattainment for the area in the vicinity of the OG&E Muskogee plant. We are considering whether the company's planned switch to natural gas for two of the units can remove the need to finalize a nonattainment designation.

Round 3 designations will be based on modeling to characterize air quality. EPA must complete its designations by December 31. The EPA published its intended Round 3 area designations August 22. Region 6 is characterizing Round 3 sources and delineating the designation areas for each source on or nearby tribal land as follows (intended designations in parenthesis):

- Four Corners Steam Electric Station, Navajo Nation, San Juan County, New Mexico (Attainment/Unclassifiable) (Region 9 lead);
- San Juan Generating Station, San Juan County, New Mexico (Attainment/Unclassifiable);
- Continental Carbon- Ponca City Plant, Kay County, Oklahoma (Attainment/Unclassifiable);
- Orion Engineered Carbons- Ivanhoe Carbon Black Plant, Columbia Chemicals- North Bend Plant, and Cabot Corp- Canal Plant all in St. Mary Parish, Louisiana (Unclassifiable); and
- CLECO Power- Brame Energy Center, Rapides Parish, Louisiana (Attainment/Unclassifiable).

The public comment period ended September 22 and the state comment period ended October 23. No comments were received specific to these areas. ***James E. Grady, 214-665-6745; Dayana Medina, 214-665-7241.***

Voluntary Programs

The Advance Program: The EPA's Advance Program supports states, tribes and local governments that want to take proactive steps to keep their air clean by promoting local actions to reduce ozone and/or fine particle pollution. Advance currently has 46 active participants located in 24 states and 9 of the 10 EPA Regions. These include 26 Ozone Advance areas, 11 PM Advance areas, and 9 areas that are enrolled in both Ozone and PM Advance. For more information, please visit https://www.epa.gov/advance. ***Ken Boyce, 214-665-7259.***

Pesticides, Toxics, Underground Tanks Branch

Tribal Consultation and Coordination:

Oklahoma Coal Combustion Residue Permitting Program – Oklahoma Department of Environmental Quality, Program Approval: The Oklahoma Department of Environmental Quality (ODEQ) has requested review and approval of their permit program consistent with the 40 CFR 257, Subpart D pertaining to coal combustion residual (CCR) units. Their application is currently under review. There are 6 CCR facilities in Oklahoma.

On October 12, 2017, letters were sent to tribal leaders offering consultation and coordination regarding the Oklahoma Coal Combustion Residuals (CCR) Permit Program Application. On October 19, 2017, Region 6 began the government-to-government consultation and coordination by having a conference call to answer questions on the CCR program and the Oklahoma application. ***Robbie Snowbarger, 214-665-7131.***

New and Upcoming Regulations:

Certification and Training Rule for Applicators of RUPs: EPA delayed the effective date of the rule until May 22, 2018. The final standards cover applicators who apply restricted-use pesticides that are not available for purchase by the general public and require special handling. The standards require that all people who are certified to apply restricted use pesticides be at least 18 years of age and that these certifications be renewed every five years. The final rule includes flexibility for states and tribes that operate certification programs to continue portions of their existing programs that are equivalent to the revised rule. ***Greg Weiler, 214-665-7564.***

New Underground Storage Tanks (UST) Regulations: The new EPA UST regulations provide additional protections for UST facilities on Indian land. Deadlines for requirements taking effect were October 13, 2015, April 11, 2016, and finally October 13, 2018. Under the new construction requirements, facilities will provide early notification, resulting in better protection from petroleum leaks into the environment. The new regulations require training for three classes of operators at all UST facilities: Class A, B and C. The training must be completed prior to October 13, 2018. Several new UST facilities have been constructed on tribal lands, which had to meet the new secondary containment requirements, and one emergency generator UST was recently constructed in Oklahoma. OUST has prepared compliance assistance publications and is developing a certification test that must be taken to obtain a certification certificate. Intertribal Environmental Council (ITEC) and the Eight Northern Indian Pueblos Council (ENIPC) are providing training to the tribes in support of the required certification. ***Larry Thomas, 214-665-8344.***

Program Implementation:

Tribal Underground Storage Tanks (UST) Inspections: During FY2018, Region 6 will inspect approximately 40 UST facilities operated on Tribal lands. Individual notifications for these inspections are sent to the owner/operator and the Tribal environmental offices 30 days before the inspection. The operators of these facilities are provided compliance assistance during

the inspections. Compliance at Region 6 tribal facilities remains high, at over 88% for the last three years. ***Larry Thomas, 214-665-8344; Heather Mann, 817-291-9106.***

Grants:

Pesticide Program Grants: Cooperative agreements were awarded to two tribal consortia, the Intertribal Environmental Council (ITEC) and the Eight Northern Indian Pueblos Council (ENIPC), to assist tribes in building capacity for pesticide programs. The goal of the tribal pesticides program is to make tribes aware of the benefits and risks of pesticides and the requirements for their safe use, thereby safeguarding human health and the environment**.** Projects are ongoing and are meeting negotiated work plan criteria. Mid-Year reviews have been conducted. ***Lee McMillan, 214-665-6404.***

Lead Paint Program Grants: The Cherokee Nation of Oklahoma was awarded a grant for 2018 to conduct a Lead Based Paint Program. The focus of the program is maintaining the appropriate infrastructure to successfully administer and enforce the lead based paint program; providing training for lead inspectors; conducting inspections of licensed contractors engaged in lead-based activities; and taking appropriate enforcement when needed. The program is ongoing and grantee is meeting all program criteria and work plan goals. The Cherokee Nation is one of only two tribes in the US that applied to EPA for treatment as a state and passed legislation to run their own lead-based paint program. ***Mike Adams, 214-665-6711.***

Underground Storage Tanks (UST) Grants: The Intertribal Environmental Council (ITEC) and the Eight Northern Indian Pueblos Council (ENIPC) grants are ongoing and are providing compliance assistance to tribal UST owners and operators. The work of these two organizations has been instrumental in maintaining a high compliance rate at Region 6 Tribal facilities. ***Audray Lincoln, 214-665-2239.***

Hazardous Waste Branch

Grants:

None

New and Upcoming Regulations:

e-Manifest: The Hazardous Waste Electronic Manifest Establishment Act, signed into law by President Obama on October 5, 2012, authorizes EPA to implement a national electronic manifest system. Commonly referred to as "e-Manifest," this national system will be implemented by the EPA in partnership with industry and states. EPA is currently working with states, industry and related stakeholders to develop a national e-Manifest system that will facilitate the electronic transmission of the uniform manifest form and make the use of the manifest much more effective and convenient for users. Key Features of the Act include e-Manifest extends to all federal- and state-regulated wastes requiring manifests; the use of electronic manifests is optional for users, and authorizes central collection of data from

electronic and paper manifests; EPA is authorized to collect reasonable user fees for all system related costs including development and maintenance; EPA must conduct annual Inspector General (IG) audits and submit biennial reports to Congress; and EPA must establish a uniform effective date in all states for e-Manifest, and must implement e-Manifest until States are authorized. It is anticipated that the User Fee Rule which will provide for collecting user fees to cover the cost for developing, operating, maintaining, and upgrading the system, will be final in December 2017, and the e-Manifest system will be implemented in June 2018. ***Matt Loesel 214-665-8544 and Melissa Smith, 214-665-7357.***

Tribal Consultation and Coordination:

Fort Wingate Depot Activity, New Mexico: Fort Wingate Depot Activity (FWDA) closed under Base Realignment and Closure (BRAC) in 1993. Closure and post-closure is managed under a New Mexico Environment Department 2005 state Resource Conservation and Recovery Act (RCRA) permit for closure and post-closure. Base size at closing was 21,131 acres. Most of the facility is scheduled to be returned to the Navajo Nation and the Pueblo of Zuni. Nine of eleven land parcels, totaling 2,496 acres, were transferred to Department of Interior (DOI) via an August 3, 2017, letter from the Department of the Army to DOI. These parcels were previously approved by NMED for No Further Action and removed from the RCRA permit. Major remediation work at the former Open Detonation/Open Burn (OB/OD) Area resumed in July 2017. Tribal and BIA participation continues in the base closure process. There was a regularly-scheduled Base Closure Team meeting in Gallup on November 8, 2017. ***Laurie King, 214-665-6771.***

Facility Specific Information:

Los Alamos National Laboratory Hexavalent Chromium Groundwater Plume, New Mexico: Potassium dichromate was used in the cooling towers at some of the Los Alamos National Laboratory (LANL) power plants. It is estimated that up to 72,000 kg of hexavalent chromium cooling water was discharged into Sandia Canyon from 1956-1972. The discharged water traveled downstream approximately 2 miles to an infiltration point in Sandia Canyon, where hexavalent chromium has contaminated the regional aquifer, which is approximately 1,000 feet below ground. The most recent contaminant-characterization monitoring well to be installed was SIMR-2, located on Pueblo de San Ildefonso. The well is located slightly off-gradient of the main-plume front along the southern facility boundary. The most recent sampling at SIMR-2 occurred on June 21, 2017, and showed chromium at 4.30 ppb. The New Mexico Environment Department (NMED) standard is 50 ppb. The average background concentration of hexavalent chromium in the regional drinking-water aquifer is 4.16 ppb, with an upper tolerance limit at 7.48 ppb. The Interim Measures (IM) plume control, as implemented by LANL in 2015, consists of four extraction wells and six injection wells. LANL is currently constructing the fourth extraction well, CrEX-4, and completed the sixth injection well, CrIN-6. CrEX-4 is located along the southwest edge of the plume-front. Once CrEX-4 is completed, aquifer testing and sampling and analyses for chromium and other contaminants will take place. CrIN-6, the last injection well to be installed as part of the LANL's IM for plume control, is located along the northeastern edge of the plume-front and produces chromium at 270 ppb. Functional testing of the IM chromium plume-control pump, treat, and re-injection system is in progress. Once testing

is complete, LANL will initiate extraction and injection along the southern-facility boundary with the objective of achieving and maintaining a 50-ppb downgradient plume edge within the facility boundary. ***Laurie King, 214-665-6771.***

Management Division

OFFICE AND STAFF UPDATE

Donna Miller will be retiring December 2017 and Amy Camacho has been selected as the Region 6 Grants Management Officer. Amy has over 10 years of grants experience serving as a project officer from an array of EPA programs from both the Water and Superfund divisions, including the Clean Water and Drinking Water State Revolving Fund programs as well as the Brownfields program. Her outside experience comes from the State of Texas (Texas Water Development Board) where she directed and implemented both state and federal grant programs. She can be reached at 214.665.7175 or Camacho.amy@epa.gov.

August 2017, the Region 6 Quality Assurance Manager, Don Johnson retired. For QA questions or concerns, RTOC members can contact Walt Helmick. He can be reached at 214.665.8373 or helmick.walt@epa.gov.

Superfund Division

TRIBAL CONSULTATION AND COORDINATION

VARIOUS REMOVAL/REMEDIAL ISSUES

Pawhuska High School Emergency Response: On August 14, 2017, the Environmental Protection Agency Region 6 (EPA) was notified of the evacuation of the Pawhuska High School, due to high levels of an explosive gas. EPA dispatched an On-Scene Coordinator and contractors to conduct an assessment of the situation. EPA held daily conference calls with and coordinated closely with an active work group of tribal, state, and federal officials to determine the appropriate course of action. EPA conducted air monitoring and air sampling to confirm indoor air levels were below EPA screening level for hazardous chemicals.

On August 21, 2017, EPA participated in a public meeting hosted by the Pawhuska Public Schools. The purpose of the meeting was to summarize the incident and response efforts, discuss plans to address the seeps at the geothermal well locations and oil and gas production wells, and address concerns posed by local residents.

To address elevated levels of methane occurring outside the school from geothermal wells, EPA made recommendations and even provided design options for an emergency ventilation system. Construction of this system required the Osage Nation Congress to reach an intergovernmental agreement between the Osage Nation and the State of Oklahoma. Once the agreement was reached, the emergency ventilation system was completed on August 28, 2017. Additionally, a historic gas well located on the softball field was plugged under the authority and jurisdiction of the Osage Minerals Council, with financial assistance from the Oklahoma Office of Emergency Management.

On October 2, 2017, at the request of the Pawhuska School Administration and other members of the workgroup (Osage Nation, Osage Mineral Council, Oklahoma Office of Energy & Environment, Oklahoma Corporation Commission, Oklahoma Water Resource Board, Bureau of Indian Affairs, and the Oklahoma Fire Marshall), the EPA team returned to the site to address concerns expressed by school officials that potentially contaminated soil was left on the softball field following the plugging of the gas well. EPA conducted extensive soil sampling across the softball field. Analytical results were received and the results were reviewed by an EPA toxicologist. The analytical results for metals, volatile organic compounds, semi-volatile compounds, and total petroleum hydrocarbons were either non-detect or were below U.S. EPA Regional Screening Levels. Additionally, the arsenic concentration range was consistent with the arsenic background level in Oklahoma soil, confirming the soils at the Pawhuska High School softball field are unlikely to cause harm to people utilizing this facility.
Ronnie Crossland, 214-665-2721.

Jackpile-Paguate Uranium Mine Site: On August 2, 2017, EPA, Atlantic Richfield, and the Pueblo of Laguna met at the former mine site area to kick off the scoping activities associated with conducting a Remedial Investigation/Feasibility Study for the site.

On September 6, 2017, an Open House was held at the Pueblo gymnasium so that the community could informally meet with the Superfund technical team members including other technical parties and institutions conducting research at the site. The Superfund technical team is continuing collaboration with Atlantic Richfield on planning documents before any field work begins at the site. Preliminary field activities are expected begin in early 2018. John Meyer 214-665-6742

Quapaw Tribe: The EPA continues to work closely with the Quapaw Tribe and the Oklahoma Department of Environmental Quality (ODEQ) in implementing the Tar Creek Superfund site remedy. Since the awarding of a Remedial Action Cooperative Agreement (CA) in FY2012 for the Catholic 40, the first-ever CA in the nation where a Tribe performed a Superfund remedial action on property that they own, the EPA has continued to award the Quapaw Tribe CAs for remedial actions at Beaver Creek North (CP060), Distal 7 North (Drainage Feature), Distal 10/12, and Distal 13. CAs with the Tribe for the Bird Dog chat base, and other areas of the site, are currently being discussed.

On April 18, 2017, the EPA's RPM provided a presentation at the Institute for Tribal Environmental Professions – Tribal Superfund Working Group Training in Quapaw, Oklahoma. The RPM discussed the EPA's experience working with the Quapaw Tribe on implementing the Site's remedial actions under cooperative agreements.

A Bench-Scale Study on the use of soil amendments, led by the EPA's Environmental Response Team, was recently completed at the Catholic 40 (Quapaw tribal trust land). The purpose of the study is to determine if soil amendments can reduce the bioavailability of cadmium, lead, and zinc. The successful use of soil amendments could reduce the amount of transition zone soils (i.e., native soils underneath chat piles/bases) which would otherwise be excavated and taken to a repository for final disposal. The Quapaw Tribe, with technical assistance from the EPA and the ODEQ, will be implementing long-term performance measures at the Catholic 40 and other distal areas to determine the effectiveness of the soil amendments in meeting the remedial action objectives specified in the 2008 Record of Decision for Operable Unit 4 (Source Material). The EPA, Quapaw Tribe, and the ODEQ are discussing additional options for reducing the amount of soils that are excavated from the Site and disposed at the central repository. *John Meyer, 214-665-6742*

AWARD FUNDING

Quapaw Tribe: EPA has awarded two separate Cooperative Agreements regarding the remediation of distal areas in the Tar Creek Superfund Site:

- Tar Creek Distal 13 - $ 286,569
- Tar Creek Distal 10 & 12 - $4,896,088

Tony Talton 214-665-7205

Tar Creek OU5: Currently, the EPA in coordination with the tribes, states, and other federal agencies is conducting OU5 remedial investigation field sampling activities. Coordination efforts include the review and comment on the Data Gap Report, the review and development of the conceptual exposure model for the human health risk assessment, and the review and development of the field sample plan. Subsequent to the April 10, 2017, meeting to start the field event planning, efforts for the collection of data gaps included conference calls to discuss potential sample locations, tribal sample participation, and confirmation sample collection procedures. Field sampling began July 10, 2017, with scheduled activities through November 3, 2017. Throughout the field sampling event, updates and summaries of progress have been provided along with additional requests for assistance in field location and collection. The next stakeholder update meeting is scheduled for November 7, 2017, and will focus on field sample accomplishments and human health exposure parameters that will be used in the human health risk assessment. The EPA will continue to coordinate with the tribes interested in the Tar Creek Site through periodic meetings and conference calls. John Meyer, 214-665-6742

Wilcox Oil Company: An availability session will be held on November 2, 2017. The session is open to all interested in the site and the ongoing field event. On July 26, 2017, EPA presented at the annual Inter-Tribal Environmental Council (ITEC) conference on the present site conditions and upcoming activities. The last open house was held on April 13, 2017, and provided an update on current site activities. The EPA and ODEQ continue to coordinate with the tribal groups interested in the Wilcox Site. The ITEC, Sac and Fox Nation, Muscogee (Creek) Nation, Cherokee Nation, Bureau of Indian Affairs, and Indian Health Service participate in the site meetings and visits. Since finalizing the site Sample and Analysis Plan, EPA completed four field events, the most recent being in April 2017, and is currently conducting field event five which started on October 16 and is scheduled through November 8, 2017. John Meyer, 214-665-6742

Oklahoma Refining Company Superfund Site, Cyril, Oklahoma – Coordination/Meeting with the City of Cyril and Inter-Tribal Environmental Council: On April 18, 2017, EPA Region 6, along with the Oklahoma Department of Environmental Quality (ODEQ) met with the Mayor of Cyril and the Inter-Tribal Environmental Council (ITEC) concerning the status of the remedial activities being performed at the Oklahoma Refining Company Superfund Site located in Cyril, Oklahoma. EPA and ODEQ met with ITEC in the morning and with the Mayor of Cyril in the afternoon hours. Recent improvements to on-site drainage were discussed with the Mayor in addition to various site maintenance issues. Recent sampling activities conducted in Gladys Creek were discussed with ITEC. *John Meyer, 214-665-6742*

New Mexico Abandoned Uranium Mines: Investigations into the impacts on groundwater from legacy uranium mining and milling are continuing. The Phase 1 Ground Water Investigation was released to stakeholders and the public in September 2016. The Phase 2 Ground Water Investigation will be released in early 2018. EPA will schedule community meetings once the report is released to give a summary of the findings and answer questions.

The Ambrosia Lake non-time critical removal assessments are also continuing. Field work in the western and eastern areas of Ambrosia Lake has been completed and the central area will be completed in early 2018. The data is being utilized to prepare Engineering Evaluation/Cost

Analysis (EE/CA) Reports for these areas. This work is being funded by proceeds from the Tronox Settlement.

The Johnny M Mine Engineering Evaluation/Cost Analysis will be released to the public for a 30-day public comment period in the fall of 2017. The report identifies alternatives that were evaluated to address mine waste at the Site and identifies a preferred alternative.

Coordination meetings are held on a regular basis with Region 6, Region 9, Navajo Nation, NMED, and NMEMNRD to discuss priorities for current and future removal work in the legacy uranium mines under the Tronox settlement. The most recent meetings were held on October 25-26, 2017. *Ben Banipal, 214-665-7324, John Meyer, 214-665-6742, Ronnie Crossland, 214-665-2721*

BROWNFIELDS

128a Tribal Response Program Updates:

- The **Funding Request Guidance** for Brownfields 128a programs was published in the Federal Register September 25, 2017. Funding Requests are due to Amber Howard (howard.amber@epa.gov) by no later than December 15, 2017. *Tony Talton, 214-665-7205*
- The **National Brownfields Conference** will be held in Pittsburgh, PA December 5-7, 2017. For more information, including registration and hotel information, visit www.brownfields2017.org. *Tony Talton, 214-665-7205*
- **ENIPC** – The Eight Northern Indian Pueblo Council will be hosting an ASTM Phase I training in Santa Ana Pueblo December 11-13, 2017. Space is limited. For more information, contact Margaret Chavez. *Tony Talton, 214-665-7205*
- **Absentee Shawnee Tribe** – The Absentee Shawnee Tribe (AST), in partnership with the Oklahoma Department of Environmental Quality, has completed the Phase II assessment on the Rodeside Motel site. AST is currently evaluating cleanup options for the property. *Tony Talton, 214-665-7205*
- **The Choctaw Nation and Muskogee-Creek *Nation*** have begun establishing their 128a programs. These programs are among the newest 128a recipients, having received their first allocation for FY18. *Tony Talton, 214-665-7205*

Brownfields Cleanup Grant – Kickapoo Tribe of Oklahoma Update:

The Kickapoo Tribe of Oklahoma was selected to receive Brownfields Cleanup grant funding in the FY 2017 Brownfields grant competition. EPA Region 6 awarded the $200,000 Brownfields Cleanup grant to Kickapoo Tribe of Oklahoma to cleanup up the asbestos and lead-based paint in the heritage Kickapoo gymnasium effective October 1, 2017. Based upon kick-off Brownfields Cleanup grant meeting in Kickapoo Tribal Offices in September 2017, confirmation sampling for asbestos and lead-based paint was identified as a priority before cleanup activities can begin. EPA Targeted Brownfields Assessment offered to provide confirmatory sampling assistance to

Kickapoo Tribe of Oklahoma, and the Tribe accepted offer of assistance. *Tony Talton, 214-665-7205*

TARGETED BROWNFIELDS ASSESSMENT ACTIVITIES

Santa Clara Pueblo: The Phase I ESA site visit of the Bridge Radiator Shop in Espanola, NM was completed on October 5, 2017, on behalf of the Santa Clara Pueblo. Final Phase I ESA report will be completed by October 2017. *Tony Talton, 214-665-7205*

Cochiti Pueblo: The Sustainable Reuse Options for Cochiti's gravel mine was completed in August 2017. The Kansas State University (KSU) – Technical Assistance to Tribal Brownfields will provide additional visioning/planning assistance to Cochiti Pueblo to refine reuse plans for gravel mine. The KSU assistance includes technical assistance from the University of New Mexico (UNM), Architecture School's Indigenous. The KSU and UNM met with Cochiti Pueblo point of contact and EPA Region 6 on October 25, 2017 to begin efforts to assist Cochiti Pueblo refine reuse plan for gravel mine. The Phase III ESA to develop cleanup/stabilization plan for Cochiti's gravel mine work assignment will be awarded to a DBE contractor by December 2017. *Tony Talton, 214-665-7205*

Acoma Pueblo: The Acoma Pueblo requested a Phase II ESA for the closed building (the building construction was funded by the US Department of Commerce, Economic Development Administration) generally referred to as the "EDA Building" in Acomita Village in October 2017. Also, the Acoma Pueblo requested New Mexico Environment Department (NMED) Brownfields Program to provide a Phase I and II ESA for the Acomita School complex in October 2017. A meeting with Acoma Pueblo, EPA Region 6, and the Office of Community Revitalization was held on October 25, 2017, to discuss assistance with the brownfields properties in Acomita Village that included the EDA Building, the Acomita School, and the closed gas station/convenience store. Additional discussions included Acoma Pueblo's interest in competing for Brownfields Cleanup grant funding for the closed gas station/convenience store and closed solid waste transfer station FY 2019/2010; and technical assistance available through the KSU/UNM technical assistance for tribal brownfields sites. *Tony Talton, 214-665-7205*

Laguna Pueblo: The Laguna Pueblo requested environmental site assessment assistance on Laguna Industries – a former electric circuit board manufacturing operation from NMED Brownfields Program. The Laguna Industries was evaluated by Superfund Site Assessment in the early 1990s, and a Phase I ESA was completed for this site by the Northwest New Mexico Council of Government (NWNMCOG) Brownfields Program in 2011. Currently, the Laguna Pueblo's Police staff occupy office space at the Laguna Industries site. A meeting between Laguna Pueblo Environmental, NMED Brownfields Program, EPA Region 6 (Brownfields and Superfund Site Assessment staff) and Eight Northern Pueblo Council (ENIPC) Brownfields Program was held at Laguna Pueblo on October 24, 2017, to discuss strategy on how to undertake preliminary sampling to confirm presence of suspected contaminants. NMED Brownfields, EPA Region 6 (Brownfields and Superfund Site Assessment) and Laguna Pueblo will continue to coordinate sampling efforts. *Tony Talton, 214-665-7205*

TRAINING

Tribal Environmental Lands Forum: Superfund Site Assessment staff provided a breakout session regarding "Updates for the Grants Mining District" at the Tribal Lands Environmental Forum held in Tulsa, Oklahoma in August 2017. *Ben Banipal, 214-665-7324*

Radiation Risk Assessment Training: Superfund Risk Assessor provided Radiation Risk Assessment Training in Dallas on October 4. *Ben Banipal, 214-665-7324*

Office of Environmental Justice, Tribal and International Affairs

OFFICE AND STAFF UPDATE

James Butler, Management and Program Analyst for OEJTIA, retired in September 2017. We wish James the best in retirement!

TRIBAL FUNDING

Region 6 General Assistance Program (GAP): In FY 2017, OEJTIA finalized funding actions for sixty GAP grants, including eight Performance Partnership Grants (PPGs), totaling $7,504,064 to Pueblos, Tribal Nations and Tribal Consortia in Region 6. OEJTIA is finalizing the GAP FY 2018 funding announcement and the announcement will be sent to tribal partners and posted to the EPA Region 6 Tribal Affairs website. Applications should have a funding level of no greater than $125,000. ***Randy Gee, 214-665-8355.***

EPA-TRIBAL ENVIRONMENTAL PLANS

ETEP Update: OEJTIA finalized thirteen EPA-Tribal Environmental Plans (ETEPs) by September 30, 2017. Regions are required to work with tribal partners receiving Indian Environmental General Assistance Program (GAP) grants to establish ETEPs as outlined in the May 15, 2013 GAP guidance. The ETEPs will contain tribal environmental priorities, how the Region can assist tribal partners in achieving their priorities, and EPA's direct implementation role in Indian Country. ***Randy Gee, 214-665-8355.***

TRIBAL CONSULTATION AND COORDINATION

EPA Policy on Consultation and Coordination with Indian Tribes: Opportunities for Consultation: The following tribal consultation opportunity is currently in TCOTS:

- *Oklahoma Coal Combustion Residuals (CCR) Program*
- *State of Oklahoma Request for Updating Delegation of the NESHAPs*

Tribal consultation opportunities can be viewed at www.epa.gov/tribal. ***Randy Gee, 214-665-8355***

Compliance Assurance and Enforcement Division

Region 6 Conditionally Approves Operating Parameters for Medical Waste Incinerator on the Nambe Pueblo

On October 31, 2017, EPA Region 6 conditionally approved Monarch Waste Technologies' petition for site-specific operating parameters for the air pollution control equipment (APCE) to be used at the hospital/medical/infectious waste incinerator located on the Nambe Pueblo. The Pyromed 550 Pyrolysis System is subject to the New Source Performance Standards (NSPS) for Hospital/Medical/Infectious Waste Incinerators (HMIWI) (40 C.F.R. Part 60, Subpart Ec). Since the APCE is different than any of the configurations specified in the rule, a petition was required for approval prior to operation of the HMIWI. Representatives from both the Nambe Pueblo government and the economic development council have been active participants in technical meetings with Monarch and EPA to discuss NSPS substantive rule requirements and associated CAA permitting requirements prior to the petition being submitted. Since the facility is located on the Nambe Pueblo, EPA Region 6 will also be responsible for permitting the facility, in accordance with the NSPS Subpart Ec requirement for permitting such facilities.
Darrin Larson, 214-665-7115

Tribal Safe Drinking Water Act Update

We thank our Tribal and Pueblo partners for their continued efforts to work with EPA to comply with existing orders on consent to bring public water systems into compliance with National Drinking Water Standards. We are beginning to inspect Tribal and Pueblo public water systems for this fiscal year. Our inspectors will continue to contact you in advance prior to inspection. We are continuing to look at identifying Class V injection wells on Tribal or Pueblo lands. To date we have identified 4 or 5 facilities on several Tribal or Pueblo lands and we will continue to seek additional information from Tribal and Pueblo governments to determine whether there are additional Class V injection wells.
Jerry Saunders, 214-665-6470

Pueblo of Laguna
Environmental and Natural Resources Department
P.O. Box 194
Laguna, New Mexico 87026
Telephone: 505/552-7546
Fax: 505/552-6857

MEMORANDUM

To: **Michelle Brown**

From: **Curtis L. Francisco**
Water Quality Specialist

Date: **03-15-2010**

Subject: **Fishing in the Rio Paguate and Rio San Jose**

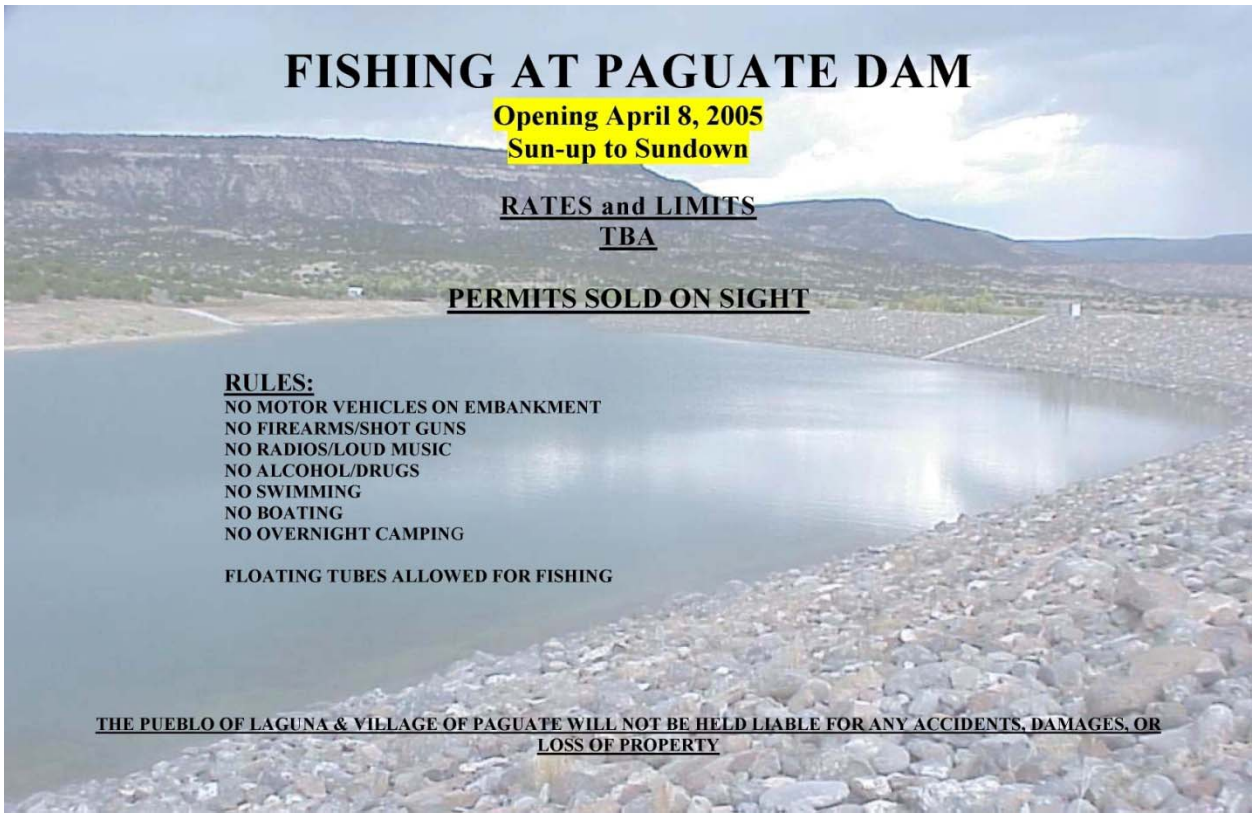
This memo is to document that fishing does occur on the Rio Paguate and Rio San Jose. The Rio Paguate above the mine is a high quality cold water fishery and has long been thought to hold a hybrid species of fish, the native trout and imported rainbow, but has not been documented by the fish and wild life service. Fish do occur in the upper reaches and are of some sort of trout species. They were being caught in the Paguate Lake prior to stocking the lake with Rainbow and Blue Channel Catfish by village members. The segments of the Rio Paguate below the mine and in the area of the Paguate Reservoir AKA Mesita Dam are also used by locals to catch catfish, bluegill and what I believe to be crappie because of the symbiotic relationship with wading birds such as herons where the fishes eggs stick to the legs of the birds and are dropped off in new bodies of water and the fish populate them. The Rio San Jose is also fished but for the same species of fish that are found in the lower reaches of the Rio Paguate. The water is warmer and shallower and is 100 percent diverted for irrigation during the growing season. The only day water is not diverted is on Sunday and is allowed to return to its natural channel.

It is important to note that fishing is only officially allowed in the Paguate Lake and operated by the Village of Paguate the other water bodies are under the jurisdiction of the Natural Resources Program but they do not issue permits for any of the other water bodies on the reservation.

The pools that collect water below the Mesita Dam and in the Rio San Jose below the convergence with the Rio Paguate are continually wet and filled with groundwater that is seeping through the Mesita Dam when up steam diversion for irrigation is taking place.

Fishing in the Rio Paguate below the mine is discouraged as is in the Rio San Jose however, residents still fish and consume the fish caught there, evidence has been observed numerous times on the Rio Paguate at and around the Mesita Dam and at the Village of Mesita at the Rio San Jose Irrigation Diversion which is below the convergence with the Rio Paguate.

Traditional uses and taking of water fowl have been also been observed on a routine and continuing basis.



The Paguate Lake is not the same as the Paguate Reservoir (AKA Mesita Dam), while they are on the same stream the Rio Paguate the Lake is above the mine and above the village of Paguate near the mouth of Paguate Canyon. The Paguate Reservoir AKA Mesita Dam is below the mine closer to the village of Mesita. This reservoir was constructed for the village of Mesita irrigation use. The water in the Rio San Jose is completely diverted up stream so there is not flow except for water coming from the Rio Paguate held by the Mesita Dam about one mile north of the convergence point of the Rio San Jose and Rio Paguate. There is a small irrigation division dam on the Rio San Jose at the village of Mesita where the water is put into the irrigation system is referred to as the Mesita Diversion. Three separate structures three separate locations.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

February 6, 2018

The Honorable Kay Rhoads
Principal Chief
Sac and Fox Nation
Administration Building
920883 South Highway 99, Building A
Stroud, OK 74079

RE: Wilcox Oil Company Superfund Site

Dear Principal Chief Rhoads:

The purpose of this letter is to extend an invitation to the Sac and Fox Nation to conduct government-to-government consultation with the U.S. Environmental Protection Agency (EPA) Region 6 regarding oil refining impacts at the Wilcox Oil Company Superfund Site. The EPA anticipates proposing a remedial action to address specific source materials at the site around April 2018. The purpose of the consultation is to provide information to the Sac and Fox Nation's leadership about the proposed action and to solicit input.

The consultation will be conducted in accordance with the EPA Policy on Consultation and Coordination with Indian Tribes. The EPA's anticipated timeline for the consultation and coordination is from the date of this letter until 30-days. During this time, the EPA will request a meeting with Sac and Fox Nation leadership for consultation and will continue to work at the staff level to provide information to the Sac and Fox Nation environmental staff.

The draft Source Control Proposed Plan (Plan) has been provided electronically to Sac and Fox Nation environmental staff. The Plan includes the evaluation of three options and is proposing Excavation and Offsite Disposal for the nine (9) identified source areas. The total estimated volume of source material is approximately 34,622 cubic yards at an estimated cost of $5,260,232.

We value the observations, insights and recommendations of the Sac and Fox Nation leaders and members, and pledge to remain engaged as we continue to work on this site. Should you have any questions or concerns, please do not hesitate to contact me at (214) 665-6701, or your staff may contact Katrina Higgins-Coltrain at (214) 665-8143 or coltrain.katrina@epa.gov. If you have any questions about the consultation process, please contact Randy Gee, Region 6 Office of Environmental Justice, Tribal and International Affairs, at (214) 665-8355.

Sincerely,

Carl E. Edlund, P.E.
Director
Superfund Division

Pueblo of Santa Clara

D R A F T

TRIBAL ENVIRONMENTAL ASSESSMENT DOCUMENT

May 01, 2002

Prepared by

Hans William Voss, J.D., M.A.

TABLE OF CONTENTS

STATEMENT OF PURPOSE

WHEREAS, the Pueblo Indians were recognized under the laws of Spain as having proprietary interest in lands set aside to them in grants by royal ordinances; and

WHEREAS, the Spanish laws in force prior to 1821 relative to Pueblo Indians and to land policy remained in full force under the Mexican rules; and

WHEREAS, the Pueblo Indians are protected by section 9 of the Treaty of Guadalupe Hildago (9 Stat. 922) which promises the free enjoyment of their liberty and property and further assures the free exercise of their religion without restriction; and

WHEREAS, the Pueblos and each of them were created and constituted as bodies politic and public corporations and given the nature of municipalities under the New Mexico Territorial Government until the granting of Statehood; and

WHEREAS, the terms “Indian” and “Indian Country” included the Pueblo Indians of New Mexico and the lands now owned or occupied by them which were involved in the disclaimer of jurisdiction under the New Mexico Enabling Act; and

WHEREAS, the constitutionality of federal control over the Pueblos was upheld in the case of United States v. Sandoval, 231 U.S. 28, which held in effect that the Pueblos of

New Mexico are Tribes entitled to the same rights of self-government under the Constitution and Laws of the United States as other Tribes; and

WHEREAS, the Supreme Court of the United States in the case of Santa Clara Pueblo et al. v. Martinez, et al. (No. 76-682) on May 15, 1978, held that Tribal Courts, which have repeatedly been recognized as appropriate forums for adjudicating disputes involving important interests of both Indians and non-Indians, are available to vindicate rights created by the Indian Civil Rights Act; and that Congress may have also considered the resolution of statutory issues under the Indian Civil Rights Act and particularly those issues to arise under a civil context, will frequently depend on systems of tribal tradition and custom that tribal courts may be in a better position to evaluate than the federal courts; and

WHEREAS, the Pueblo of Santa Clara, under the provisions of the Indian Reorganization Act of June 13, 1934 (48 Stat. 984), chose to adopt a Constitution;

WHEREAS, the North Railroad Avenue Plume Site is within the external boundaries of the Pueblo of Santa Clara.

WHEREAS, the Untied States Environmental Protection Agency has not followed guidance on Deferral of this site to the State of New Mexico.

WHEREAS, the Pueblo of Santa Clara has not entered into any agreement stating that the State of New Mexico would be the lead governmental entity in the oversight of the response actions in for the North Railroad Avenue Plume superfund site.

This Tribal Environmental Assessment Document is provided to the EPA as an expression of the concerns of the People of Santa Clara Pueblo.

The Federal Government's Trust Responsibility to the Pueblo Santa Clara

The decisions being made by the Pueblo of Santa Clara Office of Environmental Affairs and the United States Environmental Protection with regard to the NRAP site are being made in an atmosphere of dispute between tribes and federal agencies regarding the federal government's trust responsibility vis-à-vis the tribes. Even after years of debate, policy analysis and litigation, many federal agencies including EPA are still attempting to define their specific trust responsibilities. Note, on the one hand, the absence of any "guidance" document for implementing trust responsibilities to tribes. Note, on the other hand, the existence of the National Tribal Environmental Council Superfund Working Group.

However, even in the current atmosphere of debate concerning the trust responsibility, there are tenets of the "trust responsibility" that are absolutely settled. The foremost tenet in this regard is that the fact that Indian lands are held in trust for the tribes and individuals. Specific to this situation the last sentence must be read: The lands of the Pueblo of Santa Clara are held in trust for the Pueblo and its members.

Indian lands, holding this status, must be administered in a manner that specifically benefits the Indian beneficiaries, rather than the public as a whole. Which, under the facts of the current interaction between the Pueblo of Santa Clara and the Federal Environmental Protection Agency, requires that EPA act to specifically benefit the Pueblo of Santa Clara. This is not how EPA has been handling the NRAP site to date. Instead the EPA has been making 'judgment calls" in where they consider whose interests are adversely affected and thereafter seeking a balance of political interests.

Federal Case Law

The United States Supreme Court in United States v. Sandoval[1] (Sandoval) upheld the constitutionality of federal control over the Pueblos was upheld in the case of United States v. Sandoval, 231 U.S. 28, which held in effect that the Pueblos of New Mexico are Tribes entitled to the same rights of self-government under the Constitution and Laws of the United States as other Tribes; and

In the Federal case of Pyramid Lake Paiute Tribe v. Morton[2] (Pyramid Lake) the court ruled that "judgment calls" such as those being made by EPA for the NRAP site are "impermissible." Moreover, the court stated the "[t]he nature of the federal fiduciary responsibility toward the Indian Tribes differs markedly from its usual governmental authority."

[1] United States v. Sandoval, 231 U.S. 28

In Pyramid Lake the Secretary of the Department of Interior (Interior) faced a conflict between the needs of the Indian Tribe and the non-Indian ranchers served by a project of the Bureau of Reclamation (Reclamation), a sub-agency of Interior. The Interior Secretary had adopted regulations for the operation of water works that diverted waters from Pyramid Lake to provide water to ranchers. The Interior Secretary argued that federal statutes and regulations provided him with the authority to make a "judgment call" between the interests of the Paiute Tribe and the Ranchers. The court ruled otherwise and today such "judgment calls" are impermissible.

Executive Orders

Executive Orders, a tool of the executive branch of government for the development and execution of national policy. Executive Orders apply to federal agencies as they are parts of the executive branch of the federal government. These orders are frequently used as instruction concerning the implementation of federal code.

Executive Order 12898: Environmental Justice

This Executive Order, issued on February 11, 1994 is entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." It is intended to focus the attention of federal agencies on the **human health** and **environmental conditions** in the identified communities.

[2] Pyramid Lake Paiute Tribe of Indians v. Morton, 360 F. Supp. 669, 672 (DC 1973).

Importantly, in the Presidential Memorandum that accompanied the Executive Order there are requirements that each federal agency:

a. Develop agency-specific strategies to address environmental justice concerns.
b. Recognize the importance of research, data collection, and analysis concerning single, multiple, and cumulative exposures to environmental hazards for the identified communities including **Indian tribes**.
c. Collect, maintain, and analyze information on patterns of substance consumption of fish, vegetation, or wildlife. Where an agency action may affect fish, vegetation, or wildlife, that agency action may also affect subsistence patterns of consumption and indicate that there could be disproportionately high and adverse **human health** or **environmental effects** on the identified communities and **Indian tribes**.

Executive Order on Indian Sacred Sites

The President issued an Executive Order concerning Indian Sacred Sites on May 24, 1996. This Order is made up of four sections. The first section requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by the practitioners of Indian religions. Moreover, it requires that federal agencies avoid adversely affecting the physical integrity of Indian scared sites while maintaining the

confidentiality of Indian sacred sites. The second section requires that each executive branch agency with statuary or administrative responsibility fort the management of federal lands to comply with the Executive Memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments."

Executive Memoranda

In an April 29, 1994 Memorandum to the Heads of Executive Departments and Agencies concerning government-to-government relations with Native American Tribal Governments. This memorandum outlines the principle that executive departments and agencies, including their respective component bureaus and offices, are to follow in their interactions with tribal governments. It specifically provides that "[t]he purpose of these principles is to clarify our responsibility to ensure that the Federal Government operates within a government-to-government relationship with federally recognized Native American tribes."

A. Review of how the Federal Government's Trust responsibility to the Pueblo of Santa Clara effects the Environmental Protection Agency decisions with regard to the NRAP Superfund site.

METHOD

This document is provided to the Untied States Environmental protection agency with the knowledge that the State of New Mexico is likewise preparing a similar document. Indeed a draft of said document has been circulated for comment. Therefore, with multiple purposes the Pueblo of Santa Clara has prepared this Tribal Environmental

Assessment Document in parallel fashion to that of the State of New Mexico. This is done in order to avoid unnecessary duplication of effort and expense in the preparation of these documents, in the review of these documents and in the comparison of these documents. Thus, this Tribal Environmental Assessment Document will adopt by explicit reference those sections of the state document that the Tribal Counsel, under the advisement of the Pueblo of Santa Clara Office of Environmental Affairs, are in agreement with. Any necessary modification to the state document will likewise be explicitly made.

Comparison values for public health assessments are contaminate concentrations in specific media that are used to select contaminants for further evaluation. These values include:

- ATSDR Environmental Media Evaluation Guidelines (EMEGs),
- ATSDR Reference Dose Media Evaluation Guides (RMEGs), derived from the U.S. EPA Reference Dose (Chronic) by ingestion (RfD), based on a child exposure and pica behavior for soil ingestion,
- ATSDR Cancer Risk Evaluation Guides (CREGs),
- U.S. EPA Drinking Water Health Advisories (Lifetime),

- U.S. EPA Safe Drinking Water Act Maximum Contaminant Limit Goals (MCLGs),

- U.S. EPA Safe Drinking Water Act Maximum Contaminant Limits (MCLs),

EMEGs and RMEGs are concentrations calculated so that a person exposed to a medium containing these concentrations under very conservative assumptions is not likely to experience a dose of the chemical in excess of the Minimal Risk Level (MRL) of RfD, respectively. MRLs, developed by the ATSDR, and RfDs, developed by the U.S. EPA, are levels of exposure at which no adverse non-cancer health effects are expected to occur.

The ATSDR Minimal Risk Levels (MRLs) were developed as an initial response to requirements contained in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) [42 U.S.C. 9604 et seq.], as amended by the Superfund Amendments and Reauthorization Act (SARA) [Pub. L. 99-499]. Said requirements are that the Agency for Toxic Substances and Disease Registry (ATSDR) develop jointly with the U. S. Environmental Protection Agency (EPA), in order of priority, a list of hazardous substances most commonly found at facilities on the CERCLA National Priorities List (NPL). Additionally, toxicological profiles of for each substance included on the priority list of hazardous substances must be completed. These tasks are required in order that it be possible to ascertain significant human exposure levels (SHELs) for

hazardous substances in the environment, and the associated acute, sub-acute, and chronic health effects (42 U.S.C. 9604 (i) (3)); and assure the initiation of a research program to fill identified data needs associated with the substances (42 U.S.C. 9604 (i) (5))

An MRL is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse non-cancer health effects over a specified duration of exposure. These substance-specific estimates, which are intended to serve as screening levels, are used by ATSDR health assessors and other responders to identify contaminants and potential health effects that may be of concern at hazardous waste sites.

CREGs are concentrations calculated from the U.S. EPA slope factors, such that if 1 million people are exposed for their lifetimes (70 years) to an environmental medium containing a carcinogen at a concentration equal to the CREG, one additional case of cancer might result above that experienced by an equivalent population not exposed to the carcinogen.

Maximum Contaminant Levels (MCL) represent contaminate concentrations that EPA deems protective of public health over a lifetime at an exposure 2 liters of contaminated water per day for adult users. In establishing MCLs, EPA considers other factors, such as the available and economics of water treatment technology, in addition to public health factors.

Quality Assurance and Quality Control

In preparing this Tribal Environmental Assessment Document, the Santa Clara Pueblo relies on information provided in the referenced documents and believes that adequate quality assurance and quality control (QA/QC) measures were followed regarding chain-of-custody, laboratory procedures and data reporting. Unless stated otherwise, environmental data in this Document is taken from the RI report.

EXECUTIVE SUMMARY

The executive summary of the New Mexico State document is explicitly adopted as it pertains to the history of the site. The stated objectives of the Baseline Human Health Risk Assessment (BHHRA) for the NRAP site are explicitly adopted as they pertain to the health of Pueblo members as well as to those who are not pueblo members. The objective of the Tribal Environmental Assessment Document is to identify exposures that while still taking place through one of the few possible pathways are unique to Pueblo Members based on cultural practices and that will result in an increased exposure to a contaminate via a particular pathway. Said cultural practices will not and cannot be specifically identified. Instead, a statement as to the nature of each unique pathway will be provided.

The stated long-term or chronic, exposure scenarios that are evaluated by the BHHRA are explicitly adopted as a part of this document to the extent that they also apply to Pueblo members. The stated evaluations as to acute risks from plume contaminants are explicitly adopted as a part of this document to the extent that they also apply to Pueblo members.

The stated evaluation focus of the BHHRA is explicitly adopted as a part of this document to the extent that said evaluation also applies to Pueblo members.

The results of the risk calculations stated on the BHHRA are explicitly adopted as a part of this document in that these calculations also apply to Pueblo members. However, the exposure to Pueblo members will be greater than those on non-Pueblo members due to the cultural practices of the people of Santa Clara Pueblo. The stated uncertainties related to environmental sampling, exposure assumptions, toxicity information, and specific population demographics are explicitly adopted as a part of this document to the extent that they also apply to pueblo Members.

I. LIST OF TABLES

II. LIST OF FIGURES

III. LIST OF APPENDICES

Appendix Name	Appendix Title	Appendix Location
Appendix – A	Preliminary Risk-Based Screening Results / Tables Box Plots Graphically Representing the Distribution Frequency and Concentration of Chemicals in Groundwater wells	BHHRA
Appendix – B	Documentation of Exposure Assumptions For LCLS	BHHRA
Appendix – C	Sample Locations Used in Exposure Scenarios	BHHRA
Appendix – D	Data Summaries for Exposure Scenarios	BHHRA
Appendix – E	Exposure Point Concentrations for COPCs	BHHRA
Appendix – F	Modeled Future Concentrations of PCE and its Degradation Products in Groundwater	BHHRA
Appendix – G	Methodology for Calculating COPC Concentrations at Showerhead	BHHRA
Appendix – H	Methodology for Calculating COPC Concentrations in Plant Material (Pasture, Vegetables, and Fruits)	BHHRA
Appendix – I	Methodology for Calculating COPC Concentrations in Animal Material (Beef)	BHHRA

IV. LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation or Acronym	Meaning
ATSDR	Agency for toxic Substances and Disease Registry
BCF	bioconcentration factor
bgs	below ground surface
BHHRA	Baseline Human Health Risk Assessment
CNS	central nervous system
COPC	chemical of potential concern
CPT	cone penetrometer testing
CRAVE	Carcinogenic Risk Assessment Verification Endeavor
CSF	cancer slope factor
CTE	central tendency exposure
DCE	dichloroethylene
DE&S	Duke Engineering & Services
DNAPL	dense non-aqueous phase liquid
DW/kg-day	dry weight per kilogram body weight per day
EPA	United States Environmental Protection Agency
F	Fahrenheit
ft	feet
g/mol	grams per mole
GI	gastrointestinal
GWQB	Ground Water Quality Bureau
HEAST	Health Effects Assessment Summary Tables

HQ	hazard quotient
IRIS	Integrated Risk Information System
kg	kilogram
LCLS	Las Cumbres Learning Services
LOAEL	low-observed-adverse-effect-level
LSI	Listing Site Inspection
LUST	Leaking Underground Storage Tank
m3/day	cubic meters per day
M3/hour	cubic meters per hour
MCL	maximum contaminant limit
g/m3	microgram(s) per cubic meters
g/kg	microgram(s) per kilogram
Mg/kg	milligram(s) per kilogram
Mg/kg-day	milligram(s) per kilogram per day
g/L	microgram(s) per liter
mg/m3	milligram(s) per cubic meters
MPH	miles per hour
NCEA	National Center for Environmental Assessment
NMED	New Mexico Environment Department
NMEID	New Mexico Environmental Improvement Division
NOAEL	no-observed-adverse-effect-level
Norge Town	Norge Town facility
NPL	National Priorities List

NRAP site	North Railroad Avenue Plume Superfund Site
PA	Preliminary Assessment
PCE	tetrachloroethylene
ppm	parts per million
PVC	polyvinylidene chloride
QAPP	Quality Assurance Project Plan
RfC	reference concentration
RfD	reference dose
RI	Remedial Investigation
RME	reasonable maximum exposure
SCP	Santa Clara Pueblo
SCPOEA	Santa Clara Pueblo Office of Environmental Affairs
Sfi	inhalation slope factor
Sfo	oral slope factor
SLERA	Screening Level Ecological Risk Assessment
SSI	Screening Site Inspection
SVOC	semi-volatile organic contaminants
TCA	trichloroacetic acid
TCE	trichloroethylene
TEAD	Tribal Environmental Assessment Document
UCL	upper confidence limit
WW/kg-day	wet weight per kilogram body weight per day

GENERAL INTRODUCTION, BACKGROUND AND STATEMENT OF ISSUES

General Introduction

This document presents the risk assessment for the North Avenue Railroad Avenue Plume Superfund Site (NRAP site). It is drafted from the perspective of the Pueblo of Santa Clara. It is, for multiple purposes, drafted in parallel to the Draft Baseline Human Health Risk Assessment as prepared by Environmental Health Associates & University of New Mexico Center for Population Health for the New Mexico Environment Department. Because of this it is a not meant to be a stand-alone document but is meant to supplement the BHHRA which in turn is meant to supplement and be integral to the NRAP site Remedial Investigation Report as prepared by Duke Engineering and Services (DE&S) for the NMED.

Site Description and History

The entire North Railroad Avenue Plume Superfund Site, CERCLA # NMD986670156 is located within the exterior boundaries of the Pueblo of Santa Clara, in Rio Arriba County, New Mexico. It is located on Sata Clara Pueblo Trust Lands and fee lands within the exterior boundaries of Santa Clara Pueblo. (Figures 1-1 and 1-2).

Over the years, careless waste handling has resulted in the contamination of soil and groundwater with tetrachloroethylene (PCE), trichloroethylene (TCE), cis-1-2-dichloroethylene (DCE), and trans-1,2-dichloroethylene (DCE). NMED has identified a

single source as being at the Norge Town facility located within the exterior boundaries of the Pueblo of Santa Clara at 113 North Railroad Avenue, Espa™ola, New Mexico.

Based on the information reviewed, the Pueblo of Santa Clara Department of Environmental Affairs and Santa Clara Tribal Council have concluded that this site is a public health hazard because past exposures through the use of contaminated well water were at levels at levels of public health concern. Human exposure to volatile organic compounds (VOC) may still be occurring through the use of private and Pueblo well water, and the potential for exposure is increasing.

Location

As discussed in detail in section 1.2 of the BHHRA the majority of lands associated with the NRAP site are urban commercial, light industrial, residential, or small-scale agriculture. However, the most sensitive area of ecological concern and therefore of concern to the Pueblo of Santa Clara in terms of both human health and cultural effects is the area located in and adjacent to the Rio Grande. This area is know as the Rio Grande bogs. The bosque is the riparian area surrounding the Rio Grande. It includes area of forest, other riparian vegetation and wildlife that is associated with and dependent on the Rio Grande and the ground water along the river's edge.

The NRAP site is bordered on the west by New Mexico Highway 30, by the town of Española on the east, and on the north by New Mexico State Road 201. Importantly, the southern border is unidentified. This is because it cannot be defined because of the

transient state of the NRAP plume. There are however some assumptions being made about the southern border. Firstly, it is assumed that the southern border of the site extends along the Rio Grande (Ecological Risk Assessment – 2001). This assumption includes the further assumption that the NRAP plume has not entered the Rio Grande and is not traveling under the river.

Characteristics of the surface water and groundwater at the site

The Rio Grande and a Santa Clara irrigation ditch cross through the NRAP site in a north to south direction with water traveling north to south. There are many arroyos that cross the site in an west to east direction. The Guachupangue Arroyo included. Water can and does flow in all of these channels depending on the season. Small wetland areas are present along the Rio Grande during the spring and summer seasons.

Characteristics of the soil and sediment at the site

The riverbank of the Rio Grande consists of a fine sand / sediment shoreline in places with a river rock shoreline in other place and still other places along the shoreline consisting of steep edges cut into the alluvial soils. The area immediately adjacent to the Rio Grande is referred to as the bosque and is made up of riparian vegetation, forest, and seasonal wetland areas. The area beyond the bosque is primarily open field consisting of native grasses, shrubbery, and some trees. The soil is fine, textured, dry soil.

Characteristics of the biota at the site

The endangered ecosystem is made up of aquatic and terrestrial components. Plant species in the bosque area include Russian Olive and Cotton wood trees, various shrubs, grasses and forb species. Cattails and reeds grow in the wetlands adjacent to the Rio Grande. These species transition into grasses, cacti, shrubs, and trees as distance from the river's edge increases and the bosque is replaced by open field.

The site's animal life includes water birds such as ducks various crane species including the Whooping Crane, birds of prey such as the Bald Eagle, American Peregrine Falcon, Mexican Spotted Owl, and various hawk species, various passerine bird species including the Mountain Plover, Interior Least Tern, Southwest Willow Flycatcher, various crane species, mammal species such as the American Marten, New Mexican Jumping Mouse, Spotted Bat, coyote, raccoon, Red Fox, turtles, snakes, frogs, salamanders and fish.

Land and natural resource use: Indian water rights

Indian reserved water rights arise from federal treaties with the various Indian Tribes, agreements between the federal government and the various Indian Tribes, federal statutes, and executive orders. Because these rights have the status of federal rights under the Supremacy Clause of the United States Constitution, state laws cannot affect Indian reserved rights in the absence of express federal approval. The various above-mentioned types of conveyance have significant implications for the nature and scope of the right. There are three types of right depending on the nature of the conveyance. The tree types

are Winans rights, Pueblo Indian Rights, and Winters rights. Because they have different priority dates, quantification standards, rules governing changes in use and transferability, it is important to distinguish between the three types of right.

Winans rights

The nature of Winans rights are that these rights are aboriginal rights retained by various Indian Tribes when they signed treaties with the United States. In these treaties, the Indians reserved preexisting uses of water. Additionally, Winans rights exist where the federal government holds the Indian lands in trust.

Pueblo Indian rights

A second type of Indian right, related to but fundamentally different from Winans rights, are Pueblo Indian Rights. These rights arise out of the treaty of Guadalupe Hidalgo and the Gadson Purchase with Mexico. Pueblo Indian rights do resemble Winans rights in that they enjoy an aboriginal priority date, however, they have distinctive quantification standards. This is at least partly due to their Spanish origins. Therefore, Pueblo Indian rights are a distinct type of water right.

Because they are derived from Spanish and Mexican law Pueblo water rights are unlike typical reserved rights. The Spaniards recognized systems of community ditches, known as acequias, used to support mission and pueblo lands. In the 1848 treaty of Guadalupe Hidalgo, by which Mexico ceded much of the American Southwest to the Untied States, the federal government recognized preexisting property titles, including pueblo rights.

The Pueblo Indians of New Mexico have been agrarians for a thousand years, from the time before any European set foot in this country, through Spanish, Mexican, and United States rule. After the Mexican War, the United States promised to respect the property rights of Mexican citizens. As a result, in 1858, the federal government conveyed land patents to seventeen Indian Pueblos, giving them a communal, fee simple absolute to their lands.

A quarter of a century after they received their federal patents, the Supreme Court ruled that the New Mexico Pueblos did not benefit from the restraints on alienation imposed on other Indian lands by the Non-Intercourse Act. Consequently, between 1876, the date of the Court's decision, and the effective repudiation of that decision in the New Mexico Statehood Act of 1910, about 80 percent of the pueblo lands were conveyed to non-Indians. It was during this period of time that the present contaminated fee lands that are within the historical external boundaries of the Sata Clara Pueblo were alienated from the Pueblo. A Supreme Court decision tree years later seemed to re-impose the federal trust restraining alienation of pueblo lands, and subsequent congressional enactments in 1924 and 1933 sought to compensate the Pueblo Indians for their losses. These statutes terminated title to most pueblo lands, but the question of pueblo water rights remained unsettled.

Section 9 of the 1933 Pueblo Compensation Act recognized that the Pueblo Indians had a prior right to use water for domestic uses, stock watering, and irrigation on lands

remaining in Pueblo Indian ownership. In 1976, the Tenth Circuit ruled that the 1933 Act affirmed the Indians' priority over non-Indians, and that state prior appropriation law did not control Indian water rights. The appeals court did not, however, explain the source of the Pueblo Indian water right, nor attempt to quantify it. Subsequently, the district court ruled that Pueblo Indians do not possess a Winters reserved right (see iii below) because the federal government never reserved lands for the Pueblo Indians, but rather conveyed to them fee title. The court held that that the Pueblo Indians hold an aboriginal priority (time immemorial) which the federal government pledged to protect in the 1848 Treaty of Guadalupe Hidalgo and affirmed in the 1933 statute. Thus, the Pueblo Indian right resembles a Winans right and the measure of the right is not based on practicably irrigable acreage, as a Withers rights is (see iii below) but is based on historically irrigated acreage. The district court fixed this amount on the acreage irrigated at the time of the Treaty of Guadalupe Hidalgo in 1848 and, because Spanish and Mexican law allowed pueblo rights to grow to meet new needs, acreage irrigated between 1846 and passage of the Pueblo Lands Act of 1924. Additionally, Pueblo Indian water rights extend to groundwater physically interconnected to surface water, but the 1924 statute extinguished pueblo rights not used between 1846 and 1924. However, lands purchased under the 1933 Act to compensate the Pueblo Indians for lands lost are treated as "replacement lands" by the court, entitled to water on a "time immemorial" priority so long as they lie within the historical boundary of the original pueblo grant, and the measure of the right is historically irrigated acreage.

Winters rights

Other conveyances the Indian rights are expressed as grants of new uses from the federal government to the Indians. These rights are known as Winters rights. These rights are implied grants from the federal government to the Indians to take up new uses of water.

STATEMENT OF ISSUES

The NRAP upper shallow groundwater plume extends into the bosque adjacent to the Rio Grande. The entire site is within the traditional boundaries of the Santa Clara Pueblo. The plume is within the groundwater and is hydrologically connected to the Rio Grande.

The pollutants released into the groundwater via the NRAP site have been detected in groundwater sampling wells in the bosque. (DE&S, 2000). Moreover, these pollutants can migrate:

- ✓ From groundwater to surface water via the hydraulic connection between the upper shallow groundwater plume and the Rio Grande.
- ✓ From groundwater to the sediments of the Rio Grande via the hydraulic connection between the upper shallow groundwater plume and the Rio Grande.
- ✓ From groundwater to wetlands associated with the Rio Grande via the hydraulic connection between the upper shallow groundwater plume and the Rio Grande.
- ✓ From the groundwater to irrigation ditches via the hydraulic connection between the upper shallow groundwater plume and the Rio Grande.
- ✓ From groundwater to soil via vapor phase transport.
- ✓ From surface water to the atmosphere.
- ✓ From sediment to the atmosphere.

- ✓ From soil to the atmosphere.

Although the migration of the pollutants from groundwater to surface water, sediment or soil has not been established through the analytical data taken through November 1999, such migration will likely take place based on current scientific understanding of these pollutants.

Santa Clara Pueblo Community Health Concerns

The community health concerns involving this site as described in this document are specifically the health concerns of the Pueblo Community. Those concerns should be recognized as being unique to the Pueblo community because of the differences in culture and cultural practices, religion and religious practices, and interaction with the environment that take place between the Pueblo and non-pueblo people and cultures that surround the NRAP site.

DISCUSSION

Environmental Contamination

The primary chemical of concern as posing a danger to both human health and the health of the ecology is Tetrachloroethylene also called Perchloroethylene (PCE). PCE is a solvent used in the Dry Cleaning Industry. Solvents are substances, usually liquid, capable of dissolving or dispersing one or more other substances. PCE was released into soil from the Norge Town Dry Cleaning Facility, the only identified source for the NRAP site. Following its release into the soil it leached into the groundwater (DE&S, 2000).

The remaining chemicals of concern as posing a danger to human health and the health of the ecology at the NRAP site are produced as PCE breaks down and include Trichloroethylene (TCE), cis- and trans- 1, 2- Dichloroethylene (cis- and trans- 1, 2– DCE), 1, 1- Dichloroethylene (1, 1- Dichloroethylene) and Vinyl Chloride (VC).

Tetrachloroethylene or Perchloroethylene or PCE

PCE is a non-naturally occurring chemical with a sharp, sweet odor (ASTDR 1997). It is a nonflammable liquid at room temperature that will evaporate readily into the air producing an ether-like odor, which is detectable to most people at a level of 1 part PCE per million parts of air. Evaporation of PCE increases as temperature increases. (ATSDR, 1997). PCE is widely used for dry cleaning fabrics and textiles and for metal-degreasing operations. It is also used as a starting material for the production of other man-made chemicals. (ASTDR 1997)

PCE can remain in environmental media for months before being broken down into other chemicals by abiotic or biotic processes (ASTDR, 1997) In the environment much of the tetrachloroethylene that gets into water or soil evaporates into the air. Evaporation of PCE increases with temperature. PCE volatizes more rapidly from water than soil. This is most likely due to organic materials that bind it to the soil (ASTDR, 1997) Wind velocity and water flow affect volatilization with faster movement of media resulting in an increased rate of evaporation., Microorganisms can break down some of the tetrachloroethylene in soil or underground water. In the air, it is broken down by sunlight into other chemicals or brought back to the soil and water by rain. Tetrachloroethylene

does not appear to collect in fish of other animals that live in water (ASTDR, 1997).

Some of PCE's breakdown products, such as trichlorethylene (TCE), are harmful to human and environmental health.

Bioavailability of PCE

PCE does not seem to bioaecumulate in aquatic animals (ATSDR, 1997) and bioaccumulation in terrestrial organisms appears unlikely based on modeled transfer factors (LANL, 2000). In mammalian species (ATSDR, 1997) and probably in most vertebrate species, PCE can be inhaled, ingested or absorbed through the skin(SLERA, 2001). Most invertebrates can probably be exposed via direct contact with the contaminated media they live in while plants can probably be exposed through root uptake (SLERA, 2001).

Bioconcentration factors (BCFs) range from 10 to 100 for PCE in fish, indicating a low tendency to bioconcentrate (ATSDR, 1997). Studies of PCE bioaccumulation through the aquatic food chain indicate that biomagnification from water to the highest trophic levels (fish liver, sea bird eggs, seal blubber) is less than 2 orders of magnitude. No clear data on PCE in fruits and vegetables have been found (ATSDR, 1997).

Toxicity in mammals

In tests done of rodents, PCE has been found to cause liver and kidney damage and cancers as well as reproductive problems when inhaled at high concentrations, and neurological/behavioral effects in offspring when given oral doses (ATSDR, 1997). Most PCE leaves the mammalian body during respiration regardless of exposure route and the rest is excreted in urine (SLERA, 2001). However, some PCE will remain in body tissues, especially fatty tissues for weeks. PCE can be broken down in the mammalian body to trichloracetic acid (TCA) that is also toxic. The mechanism of toxicity for PCE in mammals is probably via tissue damage and particularly in fatty tissues. The overt effect may be observed in bodily tissues, organs, and/or on a bodily system such as the reproductive system (SLERA, 2001).

Toxicity in terrestrial plants

PCE has been shown to reduce growth in lettuce plants exposed in solution; however, the mechanism of toxicity is unknown (Efroymson et al., 1997).

Toxicity in aquatic organisms

Chronic toxicity has been observed in fish, daphnia and aquatic plants (LANL, 2000).

Toxicity in birds

No toxicity information found (SLERA, 2001).

Toxicity in terrestrial invertebrates

PCE has been shown to have an adverse affect on enzymatic activities associated with the important role of biochemical turnover (Kanazawa and Filip, 1986).

Trichloroethylene (TCE)

Trichloroethylene is a nonflammable, colorless liquid with a somewhat sweet odor and a sweet, burning taste. TCE is a synthetic chemical and a breakdown product of PCE (ASTDR, 1997). TCE volatizes rapidly, taking days or weeks to breakdown in environmental media. (ASTDR, 1997). However, it does so more efficiently in are and surface water than in groundwater and soil. (SLERA 2001). It is used mainly as a solvent to remove grease from metal parts, but is also an ingredient in adhesives, paint removers, typewriter correction fluids, and spot removers. (ATSDR, 1997).

In the environment trichloroethylene easily dissolves in water, and it remains there for a long time. However, trichloroethylene quickly evaporates from surface water, so it is commonly found as a vapor in the air. It evaporates less easily from the soil, where it

may stick to particles and remain for a long time. It may also stick to particles in water and eventually settle to the bottom sediment. (ATSDR 1997). Trichloroethylene is not thought to build up significantly in plants and animals (ATSDR 1997).

Bioavailability of TCE

Terrestrial plants such as trees have been shown to take TCE from groundwater at concentrations as low as 50 ppb (Vroblesky, 1999). TCE does not appear to bioaccumulate in aquatic organisms (ATSDR, 1997) or mammalian or avian species (LANL, 200). It can be inhaled, ingested or absorbed through the skin of mammalian species (ATSDR, 1997) and probably of most other vertebrate species (SLERA, 2001). Most invertebrates can probably be exposed via direct contact with the contaminated media they reside in while plants can probably be exposed through root uptake (SLERA, 2001).

Toxicity in mammals

Exposure of rodents to moderate levels of TCE is associated with liver and kidney damage, and developmental effects on the heart in rodents (ATSDR, 1997). High TCE exposure has been associated with cancer of the lungs, liver and testes in rodents (ATSDR, 1997).

TCE distributes to the blood and tissues, particularly in fatty tissues (ATSDR, 1997). When inhaled, about half the inhaled amount will be absorbed into the blood and organs(ATSDR, 1997). When ingested, almost all of the ingested amount will be absorbed into the blood (ATSDR, 1997). However, when exposed to the skin , very little of the of the chemical that comes into contact with the skin will actually be absorbed into the blood (ATSDR, 1997).

TCE is rapidly metabolized to other chemicals and eliminated from the body in urine or directly exhaled, but continuous exposure will cause retention of TCE and its breakdown products for brief periods in organs, particularly fatty tissues (ATSDR, 1997). TCE can

breakdown to dichloroacetic acid (DCA), TCA, chloral hydrate, and 2-chloroacetaldehyde, which are also toxic in themselves (ATSDR, 1997). TCE's mechanism of toxicity may be associated with direct tissue damage.

Toxicity in aquatic organisms

Chronic toxicity has been observed in fish. daphnia and aquatic plants (LANL, 2000).

Toxicity in terrestrial plants

TCE did not to affect the germination of wheat, oat, barley, rye, corn, buckwheat, sunflower, beans, Lima beans, cowpeas, alfalfa, clover and timothy seeds when treated with 1300 mg of TCE directly applied to the seeds (Young, 1929).

Toxicity in terrestrial invertebrates

TCE has been reported to reduce basal respiration in microbial populations, decrease nematode diversity particularly the maturity index in riparian soils while protozoa appeared insensitive to TCE (Fuller et al., 1997). Additionally, TCE did have an adverse affect on enzymatic activities associated with the important role of biochemical turnover (Kanazawa and Filip, 1986).

Toxicity in birds

Increased embryonic death and cardiac malformations have been reported in fertile chick eggs injected with TCE (Loeber et al, 1988).

Cis- and Trans- 1, 2- Dichloroethylene (cis – and trans- 1, 2- DCE)

The two isomers of 1, 2- DCE, cis- and trans- 1, 2- DCE, make up a highly flammable, colorless liquid with a sharp, harsh odor. These isomers evaporate rapidly from surface water, sediment and soil (ASTDR, 1997). These isomers take weeks to breakdown in the air (ASTDR, 1997). While they take months to breakdown in

groundwater (ASTDR, 1997). 1,2- DCE can breakdown to VC which is a more toxic chemical (ASTDR, 1997).

Bioavailability of cis- and trans-i, 2- DCE

TCE does not appear to bioaccumulate in mammalian or avian species (LANL, 200), while information on bioaccumulation in aquatic or terrestrial plant and invertebrate species was not found (SLERA, 2001). The mixture of cis- and trans- 1, 2— DCE can be inhaled, ingested or absorbed through the skin of mammalian species (ATSDR, 1997) and probably for most other vertebrate species. Most invertebrates can probably be exposed via direct contact with the contaminated media they reside in while plants can probably be exposed through root uptake (SLERA, 2001).

Toxicity in mammals

Inhalation of high levels of either isomer of 1, 2- DCE for even short periods of time causes lung and liver damage in animals while inhalation of very high levels of trans- 1, 2- DCE can damage the heart in animals (ATSDR, 1997). Extremely high oral doses of either isomer of 1, 2- DCE can be fatal in animals while lower oral doses of cis- 1, 2- DCE can decrease the number of red blood cells in animals (ATSDR, 1997). Exposure to a mixture of 1, 2- DCE isomers can inhibit normal fetal growth in mammals; however. fertility does not appear to be affected in animals (ATSDR, 1997). Cancer has not been reported in animals exposed to either isomer of 1, 2- DUE (ATSDR, 1997). The mammalian liver rapidly metabolizes both isomers of I, 2- DCE to other chemicals (ATSDR, 1997).

Toxicity in aquatic organisms

Chronic toxicity has been observed in fish, daphnia and aquatic plants exposed to a mixture of cis and trans isomers of 1,2- DCE (LANL, 2000)

Toxicity in birds

No toxicity information found (SLERA, 2001).

Toxicity in terrestrial plants

No toxicity information found (SLERA, 2001).

Toxicity in terrestrial invertebrates

No toxicity information found (SLERA, 2001).

Vinyl Chloride (VC)

Vinyl chloride is a mild, sweet smelling synthetic chemical. (ASTDR, 1997). It is a colorless gas at normal temperatures, and is flammable and unstable at high temperatures or pressures (ASTDR, 1997). VC is a breakdown product of TCE, trichloroethane, and PCE (ASTDR, 1997). VC can exist in water or soil (ASTDR, 1997). When in contact with the atmosphere VC volatizes rapidly (ASTDR, 1997). Once in the atmosphere, VC will react with photochemically generated hydroxyl radicals (ASTDR, 1997). This breakdown process takes days to complete (ASTDR, 1997). The reaction between VC and hydroxal radicals results in the production of the following chemicals: hydrochloric acid, formaldehyde, formyl chloride, carbon monoxide, carbon dioxide, chloracetaldehyde, acetylene, chloroethylene epoxide, chloroacetylchloranil and water (ASTDR, 1997).

Bioavailability of VC

VC does not appear to bioaccumulate (ATSDR, 1997). At least in mammalian species (ATSDR, 1997) and probably in most vertebrate species, VC can be inhaled, ingested or absorbed through the skin. Most invertebrates can probably be exposed via direct contact with the contaminated media they live in while plants probably are exposed through root

uptake (SLERA, 2001).

Toxicity in mammals

High exposures of VC can cause heart, liver, lung, and kidney damage and prevent blood clotting (ATSDR, 1997). Long-term exposure to animals can cause sperm and testes damage, maternal toxicity and when inhaled fetotoxicity and developmental problems (decreased weight gain and delayed skeletal development) (ATSDR, 1997). VC has also been associated with decreased survivorship in rats exposed orally in feed (LANL, 2000). VC is also associated with an increased risk of cancer in animals (ATSDR, 1997). Inhaled or ingested VC enters the blood rapidly and when it reaches the liver it is metabolized to other chemicals, most of which are eliminated in urine within a few days (ATSDR, 1997). However, when the liver metabolizes VC, it creates some substances that are more harmful than VC and that do not leave the body as rapidly (ATSDR, 1997). Large VC exposure will result in the exhalation of VC (ATSDR, 1997).

Toxicity in aquatic organisms

No toxicity information found (SLERA, 2001).

Toxicity in terrestrial plants

No toxicity information found (SLERA, 2001).

Toxicity in birds

No toxicity information found (SLERA, 2001).

Toxicity in terrestrial invertebrates

No toxicity information found (SLERA, 2001).

IDENTIFICATION OF EXPOSURE PATHWAYS AND ROUTES

Groundwater exposure pathways

Pueblo residents could potentially be directly exposed to contaminants through regular ingestion of groundwater as drinking water and incidental ingestion while swimming in natural or artificial pools filled with the contaminated groundwater.

Indirect ingestion exposure to contaminants in groundwater could potentially occur through consumption of either home-grown produce irrigated with or with roots in contact with groundwater, or home-raised livestock or game watered with groundwater and grazed on groundwater-contaminated pasture. Under the circumstances currently found and expected to exist into the distant future, contaminants in ground water can be taken up into plant and animal tissues. Pueblo residents could potentially become exposed to contaminants through non-ingestion pathways/routes such as skin contact while bathing or showering, swimming, and wading or inhalation of volatiles through showering/bathing and swimming/wading. These exposure pathways and routes are particularly relevant to Pueblo residents because Current/Future and Future downgradient and RG-14798 property residents may use the most contaminated groundwater and/or the RG- 14798 water, respectively, for bathing or showering, swimming, livestock watering, crop irrigation, wading, and drinking in the future (BHHRA).

Ingestion of groundwater

Drinking water ingestion is considered a potential route of exposure for the current and future child and adult residents using the Shallow Hydrostratigraphic Unit or RG-14798. The equation and assumptions that were used to calculate doses from ingestion of groundwater are presented in Tables 4.1 and 4.2 of the BHHRA for adult and child

residents, respectively.

Drinking water ingestion rates recommended by national guidances (EPA, 1991a; 1997) and adjusted for the site-specific arid climate conditions were used for the RME and CTE scenarios (BHHRA). For the RME cases, an ingestion rate of 2.6 liters per day for adults and 1.5 liters per day for children were used. These ingestion rates are based on the 95th percentile of the tap water intake rate distribution for the 20-44 year age group of both males and females combined (EPA, 1997). For the CTE adult case, an ingestion rate of 2 liters/day representing the standard national drinking water consumption rate (EPA, 1991 a) was used. For the CTE child case, an ingestion rate 0.75 liters per day was used. (EPA, 1997). These ingestion rates are questioned by the Pueblo of Santa Clara. The likely differences in ingestion due to the unique interaction with the desert environment will result in much higher rates of ingestion.

Incidental ingestion of groundwater while swimming

The equations and assumptions that were used for the RME and GTE scenarios to calculate intakes through the incidental groundwater ingestion during swimming are presented in Tables 4.1 and 4.2 of the BHHRA for an adult and a child, respectively. Based on a swimming scenario, an ingestion rate of 0.05 liters per hour (EPA, 1989) was used for both the RME and GTE scenarios and for both age groups.

The assumed exposure times of 3 hours per swimming event and 1 hour per swimming event that were used for the BHHRA RME and CTE scenarios including the assumption

of twelve swimming events per year are questioned by the Pueblo of Santa Clara. The likely differences in ingestion due to the Pueblo residents' unique, culturally driven, interaction with water resources in the environment will result in much higher rates of ingestion.

Non-ingestion groundwater use

Non-ingestion use of groundwater can result in exposure to contaminants as a result of either inhalation of volatile chemicals, or dermal absorption during showering, bathing, swimming, or wading. Exposure to chemicals through both inhalation of volatiles and dermal absorption of COPCs during showering, bathing and swimming is evaluated for the Current/Future and Future child and adult residents potentially exposed to the Shallow Hydrostratigraphic Unit or the RG 14798. However the lack of evaluation of the effects of wading is of concern to the Santa Clara Pueblo because of the fact that this activity is engaged in by Pueblo residents. Additionally, concern exists because wading involves the additional exposure to contaminants in sediment.

Dermal absorption

The equation and assumptions that were used to evaluate dermal absorption of COPCs during showering/bathing and swimming are presented in Tables 4.1 and 4.2 of the BHHRA for adult and child residents, respectively. The equation and assumptions that were used to evaluate dermal absorption of COPCs during wading are presented in Table 4.11 of the BHHRA. To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

Showering, bathing and swimming.

Total body surface areas of 23,000 and 20,000 cm^2 were used for the RME and CTE adult scenarios, respectively (EPA, 1997). Forte RME and GTE child scenarios, total body surface areas of 7,500 and 6,500 cm^2 were used, respectively (BHHRA). To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

Wading

Exposed skin surface area of 3,053 cm^2, which represents the mean surface area of lower legs and feet for males and females combined (EPA, 1997), was used (BHHRA). To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

Inhalation of volatiles while showering

Doses from the inhalation of volatile COPCs while showering were calculated for the Current/Future and Future child and adult residents potentially exposed to the Shallow Hydrostratigraphic Unit or the RG-14798. The equation and assumptions that were used to calculate intakes through the inhalation of volatile organics are presented in Tables 4.3 and 4.4 of the BHHRA. To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

Ingestion of homegrown produce

Exposure to site groundwater contaminants through the ingestion of garden vegetables and fruits irrigated with contaminated groundwater or with roots in contact with contaminated groundwater is considered as a potential route of exposure for the Current/Future and Future child and adult potentially exposed to the Shallow Hydrostratigraphic Unit or RG-14798 (BHHRA). The equation and assumptions that were used to calculate intakes through ingestion of homegrown produce for the RME and CTE scenarios are presented in Tables 4.5 and 4.6 of the BHHRA. To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

EPA-recommended values for consumption of homegrown aboveground exposed and protected produce and for consumption of homegrown belowground produce were used for the RME and CTE for adults (BHHRA). The total consumption of homegrown aboveground exposed and protected produce for a child was assumed to be 0.00119 kg DW/kgday (based on 0.00042 kg DW/kg-day for aboveground exposed produce and 0.00077 kg DW/kg-day for protected produce) and the total consumption of 0.00022 kg DW/kg-day was assumed for below ground produce (BHHRA). It is understood that these ingestion rates were derived from the 1987-1988 USDA National Food Consumption Survey and are recommended by EPA for assessing exposure to contaminants in foods grown, raised, or caught at a specific site. To the extent that these assumptions are applicable to the residents of Santa Clara Pueblo they are accepted by the Pueblo.

Ingestion of meat from home-raised beef cattle or game

Exposure to site groundwater contaminants through the ingestion of meat from home-raised beef cattle/game watered with contaminated groundwater and grazed on pasture irrigated with or with roots in contact with contaminated groundwater is considered as a potential route of exposure for the Current/Future and Future child and adult residents potentially exposed to the Shallow Hydrostratigraphic Unit or the RG-l4798 (BHHRA). The equation and assumptions that were used to calculate intakes through ingestion of meat from home-raised beef cattle/game for the RME and CTE scenarios are presented in Tables 4.7 and 4.8 of the BHHRA.

However, because of the absence of meat tissue sample data, predictive models were used (BHHRA). The methodology and the models used to calculate chemical concentrations in animal material are presented in Appendix I of the BHHRA. However, the lack of meat tissue sample data is of concern to the Pueblo.

It is understood that the EPA-recommended value of 0.00114 kg wet weight/kg body weight per day (WW/kg-day) for consumption of home-raised beef was used for the RME and CTE for adults and the consumption of home-raised beef for a child was assumed to be 0.00051 kg WW/kg-day (EPA, l998b) for both the RME and CTE scenarios (BHHRA). It is further understood that these ingestion rates were derived from the 1987-1988 USDA National Food Consumption Survey and are recommended for assessing exposure to contaminants in foods grown, raised, or caught at a specific site.

However, the Pueblo is concerned with the use of these values as they do not represent the consumption levels of beef or game by residents of the Pueblo.

CHARACTERIZATION OF RISK

PCE is the primary contaminant of concern from a cancer risk perspective. PCE shows cancer risk values that exceed the benchmark of one-in-ten-thousand cancer risk for use of water in the Shallow Hydrostratigraphic Unit at concentrations found currently both on and near the NRAP site.

If groundwater from the portion of the plume tapped by monitoring well EWMW-4B (see Figure 2-1 of the BHHRA) were used as drinking water, the maximum PCE concentration in this well could also result in health hazard from one-time ingestion of as little as about 30 milliliters of the water.

If no action is taken and the PCE is allowed to migrate, modeled concentrations indicate that the risk calculated for Maximum PCE concentrations in the Shallow Hydrostratigraphic Unit today will exist for the geographical region currently overlying the plume wells used in calculating the 95% UCL exposure concentration currently. The leading edge of the plume represented by those wells currently, and risks associated with exposure to those concentrations, will move downgradient to the Santa Clara Pueblo trust lands, resulting in unacceptable risks from potential PCE exposures there if standard exposure assumptions are used (BHHRA).

Excessive non-cancer risks would also result from use of water in the Shallow Hydrostratigraphic Unit near the NRAP site (BHHRA). However, these risks result from not only PCE concentrations, but also from TCE and manganese contamination. Adverse affects to the nervous system, the kidney, and liver would be expected, if the water were used in the ways evaluated here. Drinking water, produce irrigation and consumption, and inhalation and dermal uptake during bathing or swimming are all uses of concern.

Again, the risks to future residents, based on modeled values if no action is taken, would expand the areas of concern downgradient as described for cancer risks (BHHRA).

Uncertainties based in population demographics

Importantly, several risk factors can be found when reviewing the population demographics for the communities around the NRAP site (BHHRA). First, there is a high prevalence of diabetes. Because several of the chlorinated solvents identified as COPCs at this site target the kidney, those with diabetes could potentially be more sensitive to the effects. As discussed above, the reference values are calculated to be conservative and protective of health of the most sensitive populations, but no research data are available to determine specific sensitivity of a diabetic population to solvent toxicity to the kidneys (BHHRA).

Second, there is a high incidence of alcoholism in the community and associated high occurrence of cirrhosis of the liver. Alcohol has been reported to synergize with TCE and PCE (Valic, 1997), and therefore individuals with alcohol dependency may be a sensitive subpopulation (BHHRA).

Third, demographic information also indicates that residents are very stable in the community, and therefore exposure duration is likely to occur over a lifetime. Those exposed as children are likely to continue those exposures into adulthood. The upper 95%ile of the exposure duration has been used in these assessments to reflect these characteristics, and combinations of the childhood and adult risks may be more representative for individuals remaining in the same locality (BHHRA).

Finally, exposure to TCE during childhood has been associated with more pronounced neuropsychological deficits than exposure during adulthood (White, 1997).

CONCLUSIONS

TO BE DRAFTED AFTER INTERNAL PUEBLO REVIEW AND COMMENT

RECOMMENDATIONS

TO BE DRAFTED AFTER INTERNAL PUEBLO REVIEW AND COMMENT

PREPARERS AND REVIEWERS OF REPORT

TO BE DRAFTED AFTER INTERNAL PUEBLO REVIEW AND COMMENT

REFERENCES

Agency for Toxic Substances and Disease Registry, Minimal Risk Levels (MRLs) for Hazardous Substances, February 2000.

Agency for Toxic Substances and Disease Registry, Preliminary Health Assessment for Malvern, Pennsylvania, CERCLIS No. PAD014353445, January 19, 1989.

Agency for Toxic Substances and Disease Registry (ATSDR), Toxicological Profile for Trichloroethylene, October 1989.

Agency for Toxic Substances and Disease Registry (ATSDR), Toxicological Profile for Tetrachloroethylene, January 1990

Participating in The National Environmental Policy Act, Developing a Tribal Environmental Policy Act, A comprehensive Guide for American Indian and Alaska Native Communities. Gillian Mittelstaedt, Dean Suagee, and Libby Halpin Nelson.

Agency for Toxic Substances and Disease Registry (ATSDR). 1994. Toxicological Profile for 1,1-Dichloroethene (Update). U.S. Department of Health & Human Services,

Public Health Service, Atlanta, GA. ATSDR/TP-93/07. May 1994.

Agency for Toxic Substances and Disease Registry. 1997. Toxicological Profile for Tetrachloroethylene (Update). U.S. Department of Health & Human Services, Public Health Service, Atlanta, GA. September 1997.

DE&S – see Duke Engineering & Services

Duke Engineering & Services, 2000.

EPA – see U.S. Environmental Protection Agency

NMED – see New Mexico Environment Department

NMED 1998a. Remedial Investigation/Feasibility Study Work Plan, North Railroad Avenue Plume Site, Española, New Mexico. CERCLIIS #NMD986670156.

USDA – see U.S. Department of Agriculture

U.S. Department of Agriculture. 1987-1988. Data set: Nationwide Food Consumption Survey 1987/88 Household Food Use. U.S. Department of Agriculture. Washington, D.C. 1987/88 NFCS Database.

U.S. Environmental Protection Agency, 1989. Risk Assessment Guidance for Superfund: Volume I- Human Health Evaluation Manual (Part A). Interim Final. Office of Emergency & Remedial Response. Washington, D.C. EPA/540/l-89/002. PB9O-155581.

U.S. Environmental Protection Agency, l991a. Risk Assessment Guidance for Superfund. Volume 1 Human Health Evaluation Manual Supplemental Guidance: *Standard Default Exposure Factors.* Interim Final. Office of Solid Waste & Emergency

Response, Washington. D.C. OSWER Directive 9285.6-03.

U.S. Environmental Protection Agency, 1991b. Risk Assessment Guidance for Superfund: Volume I Human Health Evaluation Manual (Part B. Development of Risk-Based Preliminary Remediation Goals). Interim. Office of Emergency & Remedial Response. Washington, D.C. EPA1540/R-92/003. Publication 9285.7-01 B. U.S.

U.S. Environmental Protection Agency, 1992b. Dermal Exposure Assessment: Principles and Applications Interim Report. Office of Health & Environmental Assessment. Washington, D.C. EPA/600/8-91/Ol 1B, January 1992.

U.S. Environmental Protection Agency, 1997b. Health Effects Assessment Summary Tables (HEAST): FY 1997 Update. Office and Research and Development, Washington, DC. 9200.6-303 (97-1) EPA/540/R-97/036. July 1997.

U.S. Environmental Protection Agency, 1998a. Risk Assessment Guidance for Superfund: Volume 1 Part D Human Health Evaluation Manual: Standardized Planning. Reporting, and Review of Superfund Risk Assessments.

ATSDR (Agency for Toxic Substances and Disease Registry) (1997) ATSDR's Toxicological Profiles on CD-ROM. US Public Health Service. CRC Press, Inc. Boca Raton, FL.

DE&S (Duke Engineering and Associates) (2000) Remedial Investigation Report North Railroad Avenue Plume Superfund Site NPL #NMD986670156 Española, NM, Volumes 1 & 2 Albuquerque, NM: Duke Engineering and Associates, Prepared for New Mexico Environment Department Superfund Oversight Section, May 2000.

Brown, R., "North Railroad Avenue site wells", New Mexico Environment Groundwater Bureau document (August 17, 2000)

LANL (Los Alamos National Laboratory) Environmental Restoration Project. (1999) Screening Level Ecological Risk Assessment Methods. Los Alamos, NM: Los Alamos National Laboratory Environmental Restoration Project, April 1999. LA-UR-99-1405.

LANL (Los Alamos National Laboratory) Environmental Restoration Project. (2000) EOCRISK database (version 1.2). Los Alamos, NM, Los Alamos National Laboratory Environmental Restoration Project, September 30, 2000. Records Processing Facility Environmental Restoration Package ID 1 86.

USEPA (U.S. Environmental Protection Agency). (1997) Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (Interim Final). Edison, NJ: Environmental Response Team, U.S. Environmental Protection Agency, June 5, 1997.